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THIRTY-THIRD ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF

SOUTH CAROLINA



FOR THE

FISCAL YEAR 1912

TO THE

LEGISLATURE OF SOUTH CAROLINA

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COLUMBIA, S. C.
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LETTER OF TRANSMITTAL.

Charleston, S. C., Dec. 28th, 1912.

His Excellency, Col. L. Blease, Governor, Columbia, S. C.

Sir: I have the honor to submit the 33rd Annual Report of the State Board of Health, with the request that you transmit it to the General Assembly.

It is gratifying to note that the Report of the State Health Officer, in which you will find a detailed account of the work of the Board during the past year, indicates a general improvement in health conditions. One of the best indications of this improvement is the decrease in the prevalence of typhoid fever, to which your attention is directed. This has been due partly to the increasing use of typhoid vaccine, which is manufactured in the laboratory of the Board and distributed free of cost, and also to the splendid educational work of the Health Officer, Dr. Hayne, together with that of Dr. Ward and his co-workers of the Rockefeller Commission. But notwithstanding this improvement, the disease still prevails by far too widely and, by the estimate of the State Health Officer, is costing the State approximately \$525,000 per annum. If the State Board of Health concentrated its entire energy upon this one disease alone the State would be more than repaid for the expenditure required to maintain it.

According to the figures of the State Health Officer, the lives of at least two hundred children have been saved by the free distribution of diphtheric antitoxin, at an expenditure of somewhat over five thousand dollars, or less than thirty dollars for each child. Aside from the relief afforded so many suffering children, and the joy brought into so many households, which alone would be worth the costs many times over, the preservation of two hundred lives means an enormous saving to the State from the economic point of view.

The foundation of all sanitary progress is education, without which health work is built upon sand and cannot endure. It is very unfortunate, therefore, that we have lacked sufficient means for carrying on one of the most important of our undertakings—the publication of monthly bulletins, only one having been issued during the year. These bulletins, written in simple untechnical phraseology and conveying knowledge of diseases and the various

ways of preventing them, in a manner that all can understand, have exerted a far-reaching influence. I trust that the General Assembly will see the wisdom of making special provision for carrying on this most valuable educational campaign.

The Director of the Laboratory is continuing his labors with unabated zeal and energy, the best evidence of which is to be found in the growth of his department, the work last year having been more than double that of the previous year. Your attention is especially directed to his remarks upon rabies, which show the pressing need of special legislation. If all dogs were required to be muzzled at certain seasons this terrible disease would disappear.

Once more we plead for aid to enable us to grapple with the tuberculosis evil. Year after year this terrible scourge goes on, with its train of suffering and death and poverty, and its waste of hundreds of thousands of dollars, and nothing is done. Other States are spending large sums of money to check its spread, but South Carolina spends nothing. Will the legislature never awake to the economic importance of this disease and support the Board of Health in its fight?

Last year the appointment of a commission to study pellagra was recommended, and this recommendation is again made. Pellagra is increasing, undoubtedly, and with its increase the burden upon the State grows continually heavier. For economic reasons, if for no other, this commission should be appointed and a systematic study of the disease undertaken.

Respectfully,

ROBERT WILSON, Jr.,
Chairman State Board of Health.

GENERAL REPORT.

This is the 33rd Annual Report of the Executive Committee of the State Board of Health, and is for the year ending December 31st, 1912.

This report is made in compliance with the following concurrent resolution, which directs that the "Reports of the Departments of the State Government, and every officer required by law to be made to the General Assembly or to any officer, the printing of which is to be charged to the State, shall contain only a concise statement of the transactions of the officer or department without repetition, and a concise statement of recommendations and no proposed measure of copy of law, or copy of any other report or document, except such as the production of which shall be necessary, shall be printed at the expense of the State, etc."

EXECUTIVE COMMITTEE STATE BOARD OF HEALTH.

Robert Wilson, Jr., M. D., Chairman.....	Charleston
D. B. Frontis, M. D.....	Ridge Spring
C. C. Gambrell, M. D.	Abbeville
E. A. Hines, M. D.....	Seneca
W. J. Burdell, M. D.	Lugoff
Wm. Eggleston, M. D.	Hartsville
W. M. Lester, M. D.	Columbia
J. Fraser Lyon, Attorney-General.....	Columbia
A. W. Jones, Comptroller-General.....	Columbia
W. W. Dodson, Ph. G.	Greenville
Jas. A. Hayne, M. D., Secretary and State Health Officer	
.....	Columbia

STAFF OF SOUTH CAROLINA DEPARTMENT OF HEALTH.

F. A. Coward, M. D., Director Laboratory State Board of Health	Columbia
F. L. Parker, Jr., M. D., Chemist and Bacteriologist...	Charleston
J. LaBruce Ward, M. D., Director Rural Sanitation....	Columbia
Milton Weinberg, M. D., (resigned) Assistant in Rural Sanitation.	

J. T. Howell, M. D., Assistant in Rural Sanitation.
 F. M. Routh, M. D., Assistant in Rural Sanitation.
 F. D. Rodgers, M. D., Assistant in Rural Sanitation.
 L. A. Riser, M. D., Assistant in Rural Sanitation.
 Jas. A. Cain, Assistant in Laboratory.
 A. S. Williams, Assistant in Laboratory.

Mr. Cain and Mr. Williams are assistants in the laboratory under the provisions of the Rockefeller gift. In addition to Mr. Cain's duties under the Rockefeller Commission, he assists Dr. Coward in the laboratory work, and for these duties receives a salary of \$60.00 a month from the contingent fund.

In addition to the above staff, there are a clerk and a janitor paid by the Board of Health.

MEETINGS.

The Board has held, in addition to its regular quarterly meetings, a special meeting on June 11th, for the purpose of promulgating rules and regulations for the betterment of the public health, under a recent Act passed by the General Assembly. They met again on August 20th, to adopt rules governing schools and State penal institutions. The transactions of the Board at these meetings are given in detail in the minutes, which are published in this report.

Epidemic Diseases.

The State Health Officer sent out in February postal cards to all the doctors in South Carolina, requesting reports on contagious diseases occurring in their practice. The response to this appeal has not been satisfactory. At first reports were received from about one-third of the physicians, but has dwindled down to less than twenty-five reports per month.

SMALLPOX.

During the months of January, February and March, smallpox was reported to be in the following counties: Anderson, Bamberg, Chester, Dillon, Fairfield, Florence, Greenwood, Hampton, Kershaw, Lexington, Orangeburg and Spartanburg. The number of cases reported were 272. The State Health Officer visited many of these places where smallpox was reported and enforced

vaccination whenever possible. During the months of April, May and June, smallpox was reported from Beaufort, where quite an extensive epidemic prevailed in the Islands of St. Helena and Daufaski and around the town of Beaufort. An extensive campaign of vaccination was commenced and the large negro population of the above places were vaccinated. Smallpox was reported also during these months in the counties of Calhoun, Charleston, Chester, Clarendon, Florence, Georgetown, Horry, Jasper, Marion, Marlboro, Newberry, Orangeburg, Pickens, Richland, Saluda, and a very extensive epidemic in York County. This epidemic was near Sharon (York County) and the State Health Officer visited thirty-six cases of smallpox in one day in and around that neighborhood. This makes the total number reported for the months of April, May and June 106. For the months of July, August and September there was the usual summer diminution of smallpox, it being reported only in five counties, namely: Chesterfield, Greenville, Kershaw, Orangeburg and Spartanburg, and the number of cases reported being 14. The State Health Officer visited the following places in regard to smallpox: Cayce (Richland County), Stover (Chester County), Branchville (Orangeburg County), Beaufort (Beaufort County), Bullock Creek (York County), Boykin (Kershaw County), beyond city limits (Richland County), Hickory Grove (York County), Little Mountain and Prosperity (Newberry County), New Brookland (Richland County), Jacksonboro (Colleton County), Elloree and vicinity (Orangeburg County), Clinton (Laurens County). There are at present several foci of smallpox in this State, the worst being at Lever's Gin, twelve miles from Columbia, on the Monticello road. Although the law requires all children attending school to be vaccinated, many children are not vaccinated, and there is danger of an extensive spread of the disease among the children in the rural schools if this law is not more strictly enforced. The State Board of Health does not deem it wise to enforce quarantine against smallpox, as it gives a false sense of security and prevents vaccination, the only known method of checking the spread of this disease. The State Board of Health has furnished the following number of vaccine points, 47,750, at the following cost, \$3,103.75. The amount spent last year on vaccine virus was \$5,837.98, and this year it is \$3,103.75, so showing a reduction in cost. We believe that there is much less smallpox in the State this year than last, but that it has been better reported

and we can form a better estimate of the number of cases than we did the year before. There have been but two deaths reported to this office from smallpox, but it is probable that more than this number have died, but the epidemic is mild so far as the death rate is concerned, but quite severe in its constitutional manifestations. Communities are less panic-stricken than they were, and vaccination is less dreaded than formerly. The white population of South Carolina is about 75 per cent. vaccinated. The negro population about 60 per cent., if that much. So there is much work yet to be done before we finally succeed in stamping out smallpox.

SCARLET FEVER.

The following number of cases of scarlet fever have been reported in this State during the months of January, February and March, in the following counties: Anderson, 2; Bamberg, 1; Barnwell, 1; Calhoun, 1; Cherokee, 7; Darlington, 1; Dillon, 3; Florence, 1; Greenville, 13; Kershaw, 2; Lancaster, 1; Laurens, 1; Newberry, 2; Orangeburg, 1; Sumter, 4; York, 5, making a total of 45 cases reported. It is probable that a great many more cases than this existed during the quarter. During the months of April, May and June there were 14 cases reported, from Charleston, 3 from Fairfield, 12 from Greenville, 1 from Marlboro, 4 from Richland, 1 from Spartanburg, and 3 from Union, making a total of 38 cases. During the months of July, August and September there were only two counties reporting scarlet fever, Greenville and Greenwood reporting 3 cases. These figures are not correct and do not show anything like the number of cases that existed in the State, but are all reported to this office. During the months of October, November and December there have been a great number of cases of scarlet fever all over the State. The physicians have failed to notify this office, but from our personal observation we know that there has been an extensive epidemic of quite a severe type of scarlet fever and a good many deaths from this disease. The State Health Officer has visited the following places at the request of local boards: Lake City (Williamsburg County), where there were several cases; Williston (Barnwell County), Marion (Marion County). In this disease we have no method of preventing its spread, except rigid quarantine. Where the patient can be isolated from the rest of the family it is not necessary that the whole family be quarantined, but only the patient and attendant. This disease is one

that seems to become somewhat milder in its manifestations, but is always insidious and its sequela often fatal.

DIPHTHERIA.

Diphtheria has been present in this State every month during the year, but has been specially virulent during the last five months of the year, reaching its height during the month of October. The following amounts of diphtheria antitoxin have been dispensed: January, \$81.95; February, \$325.60; March, \$276.60; April, \$195.05; May, \$137.35; June, \$105.30; July, \$298.80; August, \$720.20; September, \$1,139.55; October, 1,233.45; November, \$825.30; December, \$128.50, thus making a total of \$5,467.65. We calculate from this amount that at least two hundred little children in South Carolina have been saved from death by expending this amount of money, and triple that many from taking the disease, as a large amount of the antitoxin has been used to immunize those children exposed to the disease. The public are learning the value of antitoxin and demand it at once from the physicians, consequently more has been distributed this year in proportion to the number of cases in the State than was used last year. The people demand this safeguarding of their children, and the legislature is urged to appropriate a sufficient sum to meet the demand for this wonderful cure of a most deadly disease. The contract with H. M. Alexander & Company, of Marietta, Pa., has been well carried out by them, and the Board is pleased with their present arrangement and believes that this is the best arrangement we can make towards stamping out this disease.

TYPHOID FEVER.

From the reports we have received from physicians in response to our cards, we believe that typhoid fever has decreased in this State for the past year, as compared with the year before, and that this decrease has been due to the educational campaign continually carried on, both by the State Health Officer, Dr. Hayne, and the Director of Rural Sanitation, Dr. Ward, and the physicians employed by the Rockefeller Sanitary Commission. There has scarcely been a village of any size in South Carolina that has not been visited by one of those mentioned, and lectures and personal talks as to the cause of typhoid fever given, with instruction as to the means of preventing it. Typhoid fever is due to but one

cause, namely: the swallowing of fecal matter from a person suffering from the disease, or who is yet a carrier of the germ of the disease. It is conveyed by fingers, by water, by milk, by cooked vegetables that have come in contact with the discharges of a typhoid patient, and by flies that have fed upon the discharges of typhoid patients. All of our cities are provided with pure water. Milk inspection is more and more carried on in cities. Proper sewerage systems exist in nearly all the towns, and the houses are screened against flies to a large extent; hence typhoid fever is a disease of small towns and rural districts that lack these necessary precautions against the disease. Fortunately we have recently had a weapon to fight the spread of typhoid placed in our hands, and it is an effective weapon, namely, the immunization of individuals against typhoid fever for a period of three to five years. This work has been carried on extensively from our laboratory, and we have distributed to every county in South Carolina ampules containing the prophylactic bacterin. This has been administered by the physicians (602) with uniform good results. We have distributed the following amount of typhoid bacterin, at an extremely small cost to the State: January, 536; February, 69; March, 130; April, 345; May, 423; June, 1,769; July, 2,471; August, 3,616; September, 1,145; October, 577; November, 329, showing a total of 11,400 ampules. The public and the physicians urge us to increase our facilities for manufacturing this prophylactic, and we earnestly request the legislature to appropriate a sum sufficient to employ an assistant in the laboratory and additional money for the expense of mailing this preventative. The number of deaths from typhoid fever in the United States is twenty-five per one hundred thousand population; therefore, in South Carolina, with a population of fifteen hundred thousand, there are three hundred and seventy-five deaths from typhoid fever annually. This probably is an underestimate of the number dying in South Carolina, as these figures are taken from the registration area of the United States, where health conditions are much better than they are in South Carolina. It is safe to say that five hundred die annually of typhoid fever. The loss to the State, in dollars and cents, taking each person dying at the valuation of ten thousand dollars, which is a low estimate to place on the value of human life, is a half million. This is not taking into consideration that for every death there are ten cases that get well, but are sick for at least two months. Their

sickness, in loss of time, doctor's bill, druggist bill, nursing, etc., will cost \$50.00 per case, so, taking the number of deaths in South Carolina as five hundred, we get the number of cases as five thousand. Multiplying this by the \$50.00 per case, we have another loss of twenty-five thousand dollars, which is an extremely low estimate of the actual cost in money. Typhoid fever can be stamped out entirely, as we are prepared to prove, for in the United States twenty-five people per hundred thousand die annually of typhoid fever, and in Germany only seven per hundred thousand die annually of typhoid fever, owing to the better care of the public health in Germany. As a rule, in South Carolina, in each family one out of every six contracts typhoid fever. The reports to this office from physicians show that in January, February and March, typhoid fever was in the counties of Aiken, Anderson, Charleston, Chester, Dillon, Fairfield, Florence, Kershaw, Marlboro, Orangeburg, Spartanburg, Sumter and Union, a total of 30 cases. During the months of April, May and June the counties not reporting typhoid fever were 22. These counties, of course, had many cases of typhoid fever, and I only report this to show how the physicians have disregarded the laws of the State, which require the reporting of contagious disease to local boards of health, and the reporting of local boards of health to the State Board of Health. An effort will be made during the coming year to make the duty of the physician so plain to them that our statistics may be of some value. There were during these months reported ninety cases from the other counties. During the months of July, August and September, when typhoid fever is very prevalent, twenty-one counties did not report any typhoid fever. Charleston County reported one during these three months. Anderson and Spartanburg, the two largest counties in the State, reported one case between them, whereas, Orangeburg reported twenty-nine cases. It is manifestly unfair to publish these reports, and it is only done to show how hard our task is to stamp out a disease when we cannot even locate the foci of the infection. During the months of October, November and December, only six counties reported typhoid fever. We intend, during the coming year, to continue our campaign against the disease and believe that the seed which we have sown this year in the way of lectures, personal conversations, lantern slide exhibits, etc., will produce a more hearty co-operation, especially by the public, in ridding the rural communities and small villages of this terrible drain upon their

resources. There are three things to be remembered about typhoid fever, first, that it is a disease that can be only propagated by swallowing the seed of the disease; second, that typhoid fever is the best index to the sanitary intelligence of a community; third, that if it is right and proper for the legislature to appropriate money for the relief of the distress, it is right and proper to appropriate money for the prevention of distress.

ANTERIOR POLIOMYELITIS.

(Infantile Paralysis.)

Anterior poliomyelitis (infantile paralysis) occurred only in a sporadic form in this State. During the months of January, February and March the following cases were reported to this office to be in the following counties: Anderson, 1; Charleston, 1; Florence, 2; Orangeburg, 3; Richland, 1; Spartanburg, 1; York, 1. During the months of April, May and June, there were reported one case from each of the following counties: Aiken, Edgefield, Pickens, Oconee, Spartanburg and Williamsburg. During the months of July, August and September only two counties reported one case each, namely, Kershaw and Richland. During the months of October, November and December, only two counties reported, Kershaw and Pickens. Thus, we see that only 20 cases were reported during the year in the entire State. This is probably nearly correct, as anterior poliomyelitis (infantile paralysis) means a crippled child for life, and we know from these statistics that 20 children in South Carolina were crippled for life. It is a sad thought, and we hope soon to be able to prevent some of the cases, as we now know how the disease is conveyed, namely, by the bite of the stomoxys calcitrans or ordinary stable fly conveying the disease from the sick to the well. This discovery was announced at the XV International Congress of Hygiene and Demography held at Washington, D. C., this year. The discoverer being Roseneau and his announcement of his discovery was one of the features of this Congress.

TUBERCULOSIS.

The prolongation of life by the suppression of preventable disease is of much greater value to the State than the cost of the means employed. We hang our heads in shame whenever asked what South Carolina is doing to prevent tuberculosis. We can

only answer, "all that the Legislature of that State will permit us to do." We have repeatedly requested appropriations from your body for this cause, and as frequently have we been denied. We again come before your body pleading for the homes of South Carolina where there is woe and lamentation, husbands for their wives, wives for their husbands, children for their parents, parents for their children, and the same list of calamities will be repeated every day of the year, for never a day passes in South Carolina that some one does not die of tuberculosis, and remember that the average length of a case of tuberculosis is about two years, and during that time millions upon millions of the germs have been thrown off, and thus the disease is spread. South Carolina must wake up to the fact that she owes a debt to these, her citizens, and must take care of them by providing homes in each county where advanced cases can be taken care of and a central hospital where commencing cases can be received and taught how to take care of themselves, and on return to their homes guard their loved ones against infection. Tuberculosis is, and always has been, the king of diseases. No other disease claims one-tenth of the toll from the human race that tuberculosis has always claimed. The following number of cases have been reported to this Board during the year, 315. Note—Charleston reports during the months of April, May and June, one case of tuberculosis; during the months of January, February and March, seven; during the months of July, August, September, October, November and December, none. Whereas Spartanburg reports during the months of January, February and March, seven cases; during the months of April, May and June, twelve cases; during the months of July, August and September, four cases, and during the months of October, November and December, forty-one cases. We are endeavoring to combat the disease by education, by enforcing the laws against spitting on floors, against brushing passengers in the aisle and requiring the cars to be fumigated at the end of their routes, and by our bulletins on tuberculosis, and by lectures calling the people's attention to the fact that this is a contagious disease; that its spread can be stopped, and that many incipient cases, if properly treated, can be cured. We want to do more than this, and we await your pleasure.

PELLAGRA.

Pellagra still menaces the industrial prosperity of South Carolina, for it is found to be most prevalent in the manufacturing center of South Carolina than elsewhere in the State. The Thompson-McFadden Commission of the New York Post Graduate Medical School made a most complete survey of this disease in Spartanburg County, and found present there about 450 cases. I append by county a tabulated report of pellagra existing in South Carolina: Abbeville, 38; Aiken, 20; Anderson, 43; Bamberg, 5; Barnwell, 10; Beaufort, 7; Berkeley, 2; Calhoun, 1; Charleston, 16; Cherokee, 11; Chester, 21; Chesterfield, 7; Clarendon, 5; Colleton, 3; Darlington, 8; Dillon, 13; Dorchester, 6; Edgefield, 5; Fairfield, 58; Florence, 19; Georgetown, 36; Greenville, 41; Greenwood, 40; Hampton, 3; Horry, 3; Kershaw, 14; Lancaster, 10; Lexington, 13; Marion, 6; Marlboro, 13; Newberry, 38; Oconee, 21; Orangeburg, 33; Pickens, 8; Richland, 86; Saluda, 6; Spartanburg, 105; Sumter, 36; Union, 18; Williamsburg, 8; York, 50. This report is based upon postal cards sent to each physician in South Carolina requesting him to give the number of cases of pellagra under treatment at that time. It shows a total of 886 cases in the State under treatment by physicians in September, 1912. This report is of great interest, as it shows that pellagra exists in every county in South Carolina, except Jasper and Lee. Furthermore, Dr. Siler's careful study of Spartanburg reveals 450 cases in that county, whereas in Greenville County, where conditions are exactly similar, there are only reported 41 cases. It is scarcely necessary to point out the fact that if the same careful investigation was made in Greenville County as was made in Spartanburg that approximately the same number of cases would be found there. Anderson County reports 43. I think that it would be safe to say that in the counties of Anderson, Greenville and Spartanburg, there must be at least 800 cases of pellagra. The National Association for the Study of Pellagra met in Columbia October 3-4. There were present over 300 physicians, and the subject of pellagra was discussed from all viewpoints, and it is the sense of the Association that its cause was unknown, that there was no specific reason for the disease, and that further investigation must be made as to the epidemiology of the disease before these questions could be settled. The practical part of this discussion was that there was in the South a great menace to her industrial prosperity, and that

it behooved both the Southern Legislatures and the National Congress to appropriate funds sufficient for a thorough investigation and study of this disease. Sooner or later South Carolina will have to provide a hospital for the care of indigent and insane pellagrins. Whether the disease can be communicated from man to man is still a problem to be worked out, and should it ever be proved that it can be conveyed from man to man, then the relatives and guardians of the insane who are not pellagrins will demand that pellagrin insane be housed separately. Thanks of the State is due to the Thompson-McFadden Commission, composed of Drs. Jos. F. Siler, Philip E. Garrison, Ward J. MacNeal. These men have devoted much time to the study of this disease, and have had the hearty co-operation of the physicians and laity of Spartanburg County. Thanks is also due to Drs. Lavin-der and Grim, of the United States Public Health and Marine Hospital Service, and to Mr. W. V. King and Mr. Allan Jennings, of the Agricultural Department, whose work as entomologist has been of great assistance to the State Board of Health and to the Thompson-McFadden Commission. These gentlemen were secured from the Agricultural Department by the untiring work of two of our Congressmen, namely, Hon. A. F. Lever, of the Seventh District, and Hon. Jos. F. Johnson, of the Fourth District. It is suggested to the Legislature that a sum of money be appropriated for the establishment of a Commission to study the disease in South Carolina in co-operation with the Thompson-McFadden Commission.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

This disease is an exceedingly dangerous disease, and one that claims a death rate higher than any other contagious disease that we have mentioned. It exists in two forms, an epidemic form and a sporadic form. Fortunately for us, the cases reporting in South Carolina have been sporadic, although in Anderson there were two deaths in one house that looked somewhat suspicious; also there were six cases reported in Spartanburg at one time. It is impossible to tell when the sporadic form may become epidemic. We simply wish to sound a note of warning, for during the months of January, February and March foci were reported in Anderson, Florence and Greenville Counties. During the months of April, May and June foci were reported in Marlboro County. During the months of July, August and September one

case was reported in Charleston County. During the months of October, November and December two cases were reported in Abbeville County and six cases in Spartanburg County. We have seen fit to draw up the following rules to be adopted by local boards of health in cases of cerebro-spinal meningitis, so that the State Board of Health may be warned in time of the existence of an unusual number of these cases and local boards of health be on their guard against its spread.

RULES TO BE ADOPTED BY LOCAL BOARDS OF HEALTH IN CASES OF EPIDEMIC CEREBRO- SPINAL MENINGITIS.

1. Quarantine the house, keeping in all who have been in contact with the patient.
2. The patient and nurse must be isolated in one room of the house.
3. All discharges of the patient, especially from the throat and nose, and everything used by the patient and attendants, should be thoroughly disinfected; also, after the termination of the case the room in which the patient was treated and everything in it.
4. Those who have come in contact with the disease must be kept under quarantine for three (3) weeks, their nose and throat sprayed with an antiseptic solution during this period.

NOTIFY THE STATE HEALTH OFFICER AT COLUMBIA IMMEDIATELY UPON THE APPEARANCE OF THE CASE.

MEASLES AND WHOOPING-COUGH.

Measles and whooping-cough have been very prevalent all over the State, and it is a frequent observation of the health officer to find children suffering from whooping-cough on the trains in various parts of the State. This utter disregard of the dangerous effect that this disease has upon children under one year of age, and which causes a death rate of 15 per cent., can only be obviated by a campaign of education which the State Board is trying to carry on through its bulletins. Measles is also disregarded by the laity, yet the death rate from measles is ten times that of smallpox in South Carolina. Taking everything into consideration, we are convinced that the public is becoming more and more alive to the necessity of public health work and are more and more demand-

ing of the State Board of Health and of the local boards that their health be guarded. Our correspondence has been enormous in this office, reaching 10,500 letters issued this year.

CONCISE REPORT OF WORK OF STATE HEALTH OFFICER.

I submit a concise report of the work of the State Health Officer, giving the dates of his trips and the cause of such trips.

February 15-16—Trip to Seneca—Investigation of cerebro-spinal meningitis.

March 2-3—Trip to Stover—Investigation of smallpox.

March 4—Trip to Chester—Address to County Medical Association, by invitation.

March 5-6—Trip to Spartanburg—Lecture to Civic League, by invitation.

March 7-8—Trip to Branchville—Investigation of smallpox.

March 13—Trip to Allendale—Investigation of the sanitary condition of the town, by request of citizens.

March 13—Trip to Beaufort—Investigation of smallpox.

March 14—Trip to Port Royal—Investigation of smallpox.

March 14—Trip to Ridgeland—Investigation of drainage of land, at request of Mrs. M. C. Buckner.

March 21-22-23—Trip to Bullock Creek—Investigation of smallpox.

March 25—Trip to Cayce—Investigation of smallpox.

March 27-28—Trip to Boykin—Investigation of smallpox.

April 1—Trip on Two Notch Road—Investigation of smallpox.

April 1—Trip to St. Matthews—To procure appropriation from Calhoun County for hookworm eradication.

April 4-5-6—Trip to Hickory Grove—Investigation of smallpox.

April 8-9—Trip to Little Mountain—Investigation of smallpox.

April 10-11—Trip to Darlington—Investigation of smallpox.

April 13—Trip to Prosperity—Investigation of smallpox.

April 29—Trip to Greenville—Consultation with local Board of Health in regard to drainage of meadow and other sanitary matters.

May 1-2—Trip to Anderson—Investigation of cerebro-spinal meningitis.

May 4—Trip to New Brookland—Investigation of smallpox.

May 9—Trip to Charleston—Investigation of smallpox at Jacksonboro.

May 13-14—Trip to Lancaster—Investigation of sewerage system, etc.

May 15—Trip to Ridgewood Park—Investigation of malaria at request of citizens of Eau Claire.

May 16—Trip to Blackville—Investigation of sewerage and unsanitary conditions at Blackville at request of Magistrate Hair.

May 18—Trip to Lexington—Lecture to Public School children.

May 20—Trip to Florence—Investigation of water supply at request of Board of Health.

May 21—Trip to Clio—Investigation of sanitary conditions at request of the Mayor and Board of Health.

May 28—Trip to Lake City—Address to the Civic League, by invitation.

May 31—Trip to Washington—Conference State and Territorial Board of Health and United States Public Health and Marine Hospital Service.

June 1-7—Trip to Atlantic City—American Medical Association.

June 14—Trip to Hartsville—Investigation of typhoid fever.

June 17—Trip to Spartanburg—Conference with Dr. Siler in regard to pellagra.

June 17-18-19—Trip to Greenville—Investigation of sanitary conditions Union Bleachery.

June 21—Trip to Bishopville—Inspection of fish pond in Lee County at request of grand jury.

June 28—Trip to Blaney—Investigation of smallpox.

July 2—Trip to Blackville—Address to District Medical Association at request of President of the Association.

June 10-11—Trip to Ridge Spring—Address to the Eighth District Medical Association, by invitation.

June 12—Trip to Sumter—Inspection of jail.

July 12—Trip to Bennettsville—Address to Farmers' Institution on sanitation, by invitation.

July 12-13—Trip to McColl—Lecture on sanitation, by invitation.

July 16-17—Trip to Camden—Lecture on typhoid fever at request of Civic League.

July 22-23—Trip to Elloree and Vicinity—Investigation of smallpox.

July 28—Trip to Scranton—Investigation of diphtheria.

August 5-6—Trip to Chester—Pellagra conference.

September 7—Trip to Summerville—Investigation of Taylor's Pond.

September 10—Trip to Spartanburg—Conference with Dr. Siler regarding pellagra.

September 11—Trip to Clinton—Investigation of case of alleged leprosy at request of Dr. Bailey.

September 12—Trip to Calhoun Falls—Investigation of sewerage system at Calhoun Mills.

September 13—Trip to Fairfax—Investigation of disposal of sewerage.

September 17—Trip to Clinton—Investigation of case of alleged leprosy at request of the local Board of Health.

September 18-22—Trip to Washington—To attend the A. P. H. A. and the Conference State and Territorial Boards of Health.

September 24-25—Trip to Greenville—Inspection of meadows and other sanitary conditions at the request of local Board of Health.

September 26-29—Trip to Washington—The XV International Congress Hygiene and Demography.

October 15-16—Trip to Clinton—Investigation of smallpox at request of Supervisor.

October 19—Trip to Lake City—Investigation of scarlet fever at request of local Board of Health.

October 22—Trip to St. Matthews—Investigation of Bottling Works at request of Mr. Symmes.

November 1-2—Trip to Williston—Investigation of scarlet fever at request of Dr. W. C. Smith, Chairman local Board of Health.

November 11-14—Trip to Jacksonville, Fla.—To attend meeting of the Southern Medical Association.

November 17—Trip to Marion—Investigation of scarlet fever at request of local Board of Health.

November 19-21—Trip to Charleston—Conference with Dr. Wilson, Chairman State Board of Health.

November 22—Trip to Aiken—Address to Aiken County Association by invitation.

November 22—Trip to Florence—Address to Pee Dee District Association by invitation.

FOOD AND DRUGS.

The examination as to the purity of food and drugs sold in South Carolina is being carried on still by the Department of Agriculture, by the Commissioner of Agriculture, Mr. E. J. Watson. It is the opinion of the Board that this work should be done by the State Board of Health, as it comes directly under their supervision.

LABORATORY.

The work in the laboratory this year has been more than double to what it was last year, and the fact that 600 physicians have used the facilities of the laboratory shows the State-wide usefulness of the laboratory. Dr. Coward personally manufactures the anti-rabies serum and administers same to patients coming to Columbia for treatment. In addition he puts up the anti-typhoid bacteria, and as we have sent out nearly eleven thousand ampules, this is quite an onerous undertaking, and we believe he should have an assistant for this work.

The making of blood tests for typhoid fever, malaria and the examination of sputum for tubercular germs, examination of feces for hookworm and work of like character keep Dr. Cain, who is partly employed by the State Board of Health and partly by the Rockefeller Commission, busy. Mr. A. S. Williams is employed and paid entirely by the Rockefeller Commission, and receives no money from the State.

In this report an interesting account is given by Dr. Coward of the work done by the laboratory.

EDUCATIONAL CAMPAIGN.

Owing to the fact that our appropriation was not sufficient we have had to discontinue what we consider one of the most important functions of the State Board of Health, namely, the issuing to the general public bulletins expressing in non-technical language the latest medical knowledge in regard to the safeguarding of the health of the people. These bulletins were sent to about 15,000 people in South Carolina monthly. This year we

have only issued an up-to-date bulletin on The Mosquito and the Typhoid Fly. We have, however, had a pamphlet printed on How to Construct a Septic Tank, a subject that is of interest to those living in small towns without sewerage and to those living in the country who have waterworks in their homes. We hope that the Legislature will think of this important matter when making their appropriation for this year, namely, the distribution of these bulletins.

THE BOARD'S QUARTERS.

The offices of the State Health Officer and his office force and the Laboratory is situated in LeConte College, lower floor (Gibbes' Green, corner of Pendleton and Pickens streets). These rooms are furnished us by the South Carolina University, and we are grateful to them for taking care of us, but we think so important a department of the State as the Health Department should have their own quarters.

HOOKWORM DISEASE.

Report for the year ending December 31, 1912.

To the Members of the State Board of Health:

Gentlemen: As Director of Rural Sanitation I have the honor to submit the following report of work done by the Department of Rural Sanitation during the year 1912.

Following are the names of the assistants engaged in field and laboratory work during the year:

Cain, Jas. R., Microscopist.

Howell, J. T., Doctor, Assistant Director Rural Sanitation.

Rodgers, F. D., Doctor, Assistant Director Rural Sanitation.

†Riser, L. A., Doctor, Assistant Director Rural Sanitation.

Routh, F. M., Doctor, Assistant Director Rural Sanitation.

*Weinberg, M., Doctor, Assistant Director Rural Sanitation.

Williams, A. S., Microscopist.

INFECTION SURVEY.

This is based upon the microscopic examination of at least two hundred children of school age (6-18), taken at random (without regard to clinical symptoms) from the rural district.

†Appointed July 1st to succeed Dr. Weinberg.

*Resigned to take effect May, 4th.

County.	Number		Percentage
	Examined.	Infected.	Infection.
Dillon	496	292	57
Horry	375	222	86
Marlboro	234	104	43
Oconee	256	95	38
Orangeburg	647	352	54
Spartanburg	788	245	31

It will be seen that in one county the percentage was as high as 86, while in no county was it lower than 31.

This high percentage of infection would not, of course, hold for the entire population of the county. It would probably not hold for the entire population of school age because, perhaps, the majority of persons coming to the dispensary for examination do so because they do not feel perfectly well. However, of the total number of persons of all ages examined in one county, 65 per cent. were suffering with the disease. Until every person, regardless of symptoms, is examined microscopically it will be impossible to give exact figures on the infection in the State.

SANITARY SURVEY.

This is based upon the examination of at least 200 rural homes to determine the type of privy, if any, on the premises. Each privy is given a rating or sanitary value; a well kept sanitary privy being rated at 100 per cent., and so on. The failure to have a privy, which condition obtains in the majority of cases, is rated at 00. On the above basis the following figures are given:

County.	Sanitary Index.
Chester	4
Chesterfield	6
Colleton	4
Darlington	6
Dillon	6
Edgefield	4
Florence	4
Georgetown	3
Horry	2
Lancaster	4

Laurens	5
Marlboro	7
Oconee	3
Orangeburg	5
Sumter	6
Williamsburg	4
York	6

This table shows that out of a possible 100 no county scored higher than 7 points and most of them below 5 points.

This condition more than any other factor, I believe, accounts for the prevalence of typhoid fever, diarrhoea and dysentery in our State, and upon it entirely depends the heavy infection of hookworm disease.

It might be well to mention that the sanitary condition of most of the small towns in the State is little, if any, better than the condition existing in the rural communities, with more numerous opportunities for disseminating infection.

SUMMARY OF YEAR'S WORK BY FIELD MEN.

	Howell	Riser	Rogers	Routh	Routh and	
					Howell	Weinberg
Doctors personally interested.....	132	66	73	80	20	40
Circulars distributed	7,500	7,170	12,000	12,080	....	450,000
Schools inspected	2	3	....	8	4	16
Examined microscopically	2,371	430	2,003	1,886	1,286	896
Found infected	1,180	133	795	863	298	510
Papers personally interviewed.....	21	7	13	11	7	10
Articles published	11	4	24	15	4	4
Total number treated.....	6,181	793	6,433	7,572	442	366
Treatments dispensed	12,383	1,141	10,656	11,073	3,551	722

Almost the entire time of the field men has been devoted to operating hookworm dispensaries in twenty counties. An average of six weeks was devoted to running five dispensaries in each county, and one or two weeks to delivering lectures and doing other preliminary work to arouse the interest of the people. These lectures were not only on hookworm disease but the methods of preventing all of the common communicable diseases were discussed. The increased interest of the people is shown by the fact that 56,374 persons applied at the dispensaries for examination. Of these 25,270 were found infected and treated, 54,000 doses of medicine being dispensed. The people of our State are realizing as never before the fact that it is cheaper to prevent than to cure disease.

Our ability to reach so many has been due, in no small measure, to the school teachers and to the press.

The only discouraging aspect of the work is the great difficulty of getting people to stop soil pollution, by using sanitary privies, which, after all, are much cheaper than coffins.

As soon as a sanitary privy is on the grounds of every rural school in the State we will have done much to solve this important problem, and hookworm disease will cease to sap the vitality of our people, and especially of the children, rendering them incapable, as it does, of physical and mental development.

J. LABRUCE WARD,
Director Rural Sanitation.

REPORT OF STATE BOARD OF HEALTH.

Columbia, S. C., April 16, 1912.

Mr. President and Members of the House of Delegates, South Carolina Medical Association.

Gentlemen: I have the honor to present the annual report of the Executive Committee of the State Board of Health.

The position of State Health Officer, made vacant by the resignation of Dr. C. F. Williams, was filled by the election of Dr. James A. Hayne, of United States Army Service, and formerly a member of this Board. Dr. Hayne's experience in Panama has enabled him to take up the work with an intelligent grasp.

An important and difficult problem, which has engaged the attention of the Board for several years, is the collection of vital statistics. The indifference of the profession, shown by the failure to co-operate with the Board, can be explained only by a lack of understanding of the importance of accurate records. Once more we beg you to aid us by returning promptly the cards issued by the Health Officer, which would entail a minimum of inconvenience and trouble.

We have no widespread epidemic to report. Smallpox still prevails in the following counties: Anderson, Bamberg, Barnwell, Dillon, Fairfield, Florence, Georgetown, Hampton, Jasper, Kershaw, Lexington, Mullins, Orangeburg, Sumter and York, including in all not more than six hundred (600) cases.

In addition to the free distribution of diphtheria antitoxin, the Board has undertaken the free distribution of typhoid vaccine for the prophylaxis of typhoid fever, the vaccine being manufactured in our laboratory. This venture has met with encouraging

success, the director of the laboratory reporting that he distributed between August 16, when the work was begun, to the end of the year, three thousand five hundred and fifty (3,550) immunizing doses.

The publication of the monthly bulletins has been discontinued on account of insufficient funds, the expenses of maintaining the office having increased considerably. We hope, however, to be able to issue these publications quarterly, realizing the enormous educational value which they possess. Since the last meeting of the Association the Executive Committee has visited and inspected the State Penitentiary a second time, and we wish to reiterate and to emphasize the opinion expressed in our original report of the unsanitary condition, especially of the woman's building, and the baneful influence of the hosiery mill upon the health of those employed in it, which can only be overcome by the entire rebuilding of the former and the abolition of the latter. We wish to say, however, that the authorities have endeavored to carry out, in part, other recommendations made in our report.

The Director of the Laboratory reports that he has made in all, during the year 1911, three thousand eight hundred and fifty-nine (3,859) examinations. In the Pasteur Department he reports one hundred and fourteen (114) patients treated, with only one death.

The General Assembly at the last session passed an Act to authorize the Executive Committee of the State Board of Health to adopt, promulgate and enforce rules and regulations for the betterment and protection of the public health of the State of South Carolina. This Act is of enormous importance and gives the Executive Committee greatly increased power to effect sanitary improvements throughout the State.

We have lost one member during the past year, Dr. H. T. Hall, of Aiken, who was compelled to withdraw from the service on account of his health. The vacancy thus created has been filled by the election of Dr. D. B. Frontis, of Ridge Spring. Dr. Frontis has not been able to participate in our deliberations as yet, owing to some delay in obtaining his commission.

The State Health Officer is carrying on the educational work begun by his predecessor, and is giving weekly lectures on Public Health and Sanitation at the State University.

Respectfully

ROBERT WILSON, JR.,

Chairman Executive Committee State Board of Health.

Minutes of Executive Committee Meetings.

Columbia, S. C., April 15th, 1912.

The regular quarterly (annual) meeting of the Executive Committee of the State Board of Health was held this day at its office and called to order by the Chairman at 3 p. m., with the following members present: Drs. Robt. Wilson (Chairman), C. C. Gambrell, E. A. Hines, W. J. Burdell, Wm. Egleston, W. M. Lester and W. W. Dodson.

The State Health Officer made a verbal report of work done since December 1st.

A motion was made by Dr. C. C. Gambrell that the Chairman and the State Health Officer be appointed as a Committee of two to wait on the Governor and request him to commission Dr. D. B. Frontis of Ridge Spring. A letter from Dr. Frontis was read tendering his resignation, which, upon motion by Dr. Gambrell, was not accepted.

It was moved and seconded that the State Health Officer notify the owner (W. H. Woods) of the property at Ridgeland that the backing up of water was a nuisance and must be abated. Dr. Burdell seconded this motion, which was carried.

Upon motion of Dr. Burdell the salary of John Roundtree, janitor, was raised from \$1.00 to \$1.25 on account of his faithful services and also as he does all carpentering and all technical work about the place, which would make his position hard to fill.

The Board then went into executive session and the following officers were re-elected: Dr. Robt. Wilson, Chairman, and Dr. Jas. A. Hayne, Secretary and State Health Officer.

It was decided by the Executive Committee of the State Board of Health that a call meeting should be held in the near future for the promulgation of rules and regulations for the betterment of the health of South Carolina under the provisions of "An Act to authorize the Executive Committee of the State Board of Health to adopt, promulgate and enforce rules and regulations for the betterment and protection of the public health of the State of South Carolina," which became a law at the last General Assembly.

There being no further business the Board adjourned to meet at the call of the Chairman.

JAMES. A. HAYNE, M. D.,
Secretary.

Columbia, S. C., June 11th, 1912.

A special meeting of the Executive Committee of the State Board of Health was called to order by the Chairman, Dr. Robt. Wilson, Jr., at 3 p. m., with the following members present: Drs. Robt. Wilson, Jr., D. B. Frontis, C. C. Gambrell, E. A. Hines, W. J. Burdell, Wm. Egleston, W. M. Lester, W. W. Dodson, and the Secretary and State Health Officer.

The purpose of the meeting was to promulgate rules and regulations for the betterment and protection of the public health, under a recent Act passed by the Legislature, and to consider any other matters that might be brought to the attention of the Board by the Secretary.

The following motion was offered by Dr. Hines, seconded by Dr. Lester and carried: That the State Health Officer request the Attorney-General to render the Executive Committee of the State Board of Health an opinion as to whether the "Act" to authorize the Executive Committee of the State Board of Health to adopt, promulgate and enforce rules and regulations for the betterment and protection of the public health of the State of South Carolina, will permit the enforcement of rules requiring the medical inspection of schools similar to the original Bill introduced in the Legislature, session of 1911. The State Health Officer to endeavor to secure the above opinion and report to the next regular meeting of the Executive Committee.

The following resolution was offered by Dr. Egleston and was adopted: That the Secretary be instructed to promulgate the laws adopted today bearing on railways and hotels. That the Secretary with the Committee on Code be instructed further to codify the other health laws contemplated, and have a proof of this Code submitted at the earliest possible date to each member of the Board for correction, review and completion, pending their final adoption at a later meeting.

The rules and regulations below were promulgated under the following Act:

AN ACT

TO AUTHORIZE THE EXECUTIVE COMMITTEE OF THE STATE BOARD OF HEALTH TO ADOPT, PROMULGATE AND ENFORCE RULES AND REGULATIONS FOR THE BETTERMENT AND PROTECTION OF THE PUBLIC HEALTH OF THE STATE OF SOUTH CAROLINA.

Section 1. Be it enacted by the General Assembly of the State of South Carolina, That the Executive Committee of the State

Board of Health shall have the power to make, adopt, promulgate and enforce reasonable rules and regulations, from time to time, requiring and providing for the thorough sanitation and disinfection of all passenger cars, sleeping cars, steamboats, and other vehicles of transportation in this State, and also of all convict camps, penitentiaries, jails, hotels, schools and other places used by or open to the public; to provide for the care, segregation and isolation of persons having, or suspected of having, any communicable, contagious or infectious disease; to regulate the method of disposition of garbage, or sewage, and any like refuse matter in or near any incorporated town, city, or unincorporated town or village of the State; to provide for the thorough investigation and study of the causes of all diseases, epidemics, and otherwise in this State, and the means for the prevention of contagious disease, and the publication and distribution of such information as may contribute to the preservation of the public health and the prevention of disease; to make separate orders and rules to meet any emergency not provided for by general rules and regulations for the purpose of suppressing nuisances dangerous to the public health, and communicable, contagious and infectious diseases and other dangers to the public life and health: *Provided, however,* That nothing herein contained shall be construed as in any wise limiting any duty, power or powers now possessed by or heretofore granted to the said State Board of Health or its Executive Committee by the statutes of this State, or as affecting, modifying or repealing any rule or regulation heretofore adopted by said Board.

Sec. 2. That any person who shall, after notice, violate, disobey, refuse, omit or neglect to comply with any rule of said Executive Committee of the State Board of Health, made by it in pursuance of this Act, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not exceeding the sum of

one hundred dollars or imprisoned for thirty days: *Provided*, This section shall not apply to any person until the rules of the State Board of Health are promulgated.

DEPOTS, RAILWAY COACHES, SLEEPING CARS, STREET CARS AND INTERURBAN CARS.

Regulation 1. Contagious Diseases Barred from Public Vehicles.—No person known to be suffering from the following contagious diseases, smallpox, scarlet fever, diphtheria, measles, whooping cough or other quarantinable diseases shall be allowed to enter or ride in any day coach, sleeping car, interurban car or street car, and when any such person is discovered to be in any car as mentioned above, it shall be the duty of the conductor or other individual in charge of said car to notify the nearest or most accessible county or city health officer, and the latter shall remove and isolate said patient as is proper in such case or circumstance.

Regulation 2. When the health officer or physician notified as provided in Regulation 1 shall find any person in a car, boat or other public conveyance to be afflicted with smallpox, diphtheria, scarlet fever, measles, whooping-cough or other quarantinable diseases, the car, boat or other public conveyance shall be turned over to the health officer or physician, who shall treat such conveyance as infected premises. When in the judgment of the health officer or physician the case is in such early stage of development that other passengers are not affected, the patient shall be removed from the conveyance and it shall be allowed to proceed. If the health officer or physician shall deem that the exposure is such as to have infected other passengers, he shall call upon the person in charge to remove infected conveyance from service at the first station where suitable accommodations can be secured, and such health officer or physician shall notify the health officer in whose jurisdiction the infected conveyance is left.

Regulation 3. Depots, etc., to be Ventilated and Heated.—Each depot, railway coach, sleeping car, interurban car and street car while in use for the accommodation of the public shall be properly ventilated, and, if necessary, heated, and a sufficient amount of heat shall be furnished in time of need so that fresh air can be supplied without causing it to become unduly or uncomfortably cold; and the janitor, conductor, caretaker or other person in charge shall see to it that the car is replenished with fresh

air from time to time as needed to prevent the same from becoming foul, unsanitary or oppressive.

Regulation 4. Cuspidors to be Provided, Disinfected, etc.—Cuspidors must be provided in adequate numbers in all waiting rooms of depots and railway stations; each day coach shall be provided with one cuspidor for each seat or every two chairs, and two in each smoking apartment; except that in each parlor car there may be as few as one cuspidor to every three seats and two cuspidors used in the smoking apartment; in each sleeping car shall be placed one cuspidor to each section and three cuspidors in the smoking apartment, one of which cuspidor, in the absence of a dental lavatory, shall be of unusually large size and placed near the wash basin for use in washing the teeth; each aforementioned cuspidor shall contain not less than one-third of a pint of an approved disinfectant solution, and the cuspidor shall be emptied, washed in a similar solution and replenished each trip or every twenty-four hours.

Regulation 5. Dry Cleaning Prohibited.—Dry dusting and dry sweeping is prohibited at all times in waiting rooms of depots and railway stations, or in railway coaches, sleeping cars, inter-urban cars and street cars. Dusting of passengers also prohibited except in vestibule or smoker.

Regulation 6. Coaches to be Cleaned After Each Trip; How Cleaned.—Railway day coaches shall be thoroughly cleaned at the end of each trip, and in no instance shall the day coach go uncleaned longer than two days when such coach is in use; the thorough cleaning of day coaches shall consist as follows:

(a) Windows and doors shall be first opened and the aisle strip, if there be any, removed, and, when possible, thoroughly sunned.

(b) All upholstery shall be dusted and brushed, using the vacuum process cleaning apparatus whenever possible.

(c) Floor mopped or swept, after it has been sprinkled with an approved disinfectant solution, or preferably cleaned by sprinkling with sawdust moistened with said approved disinfectant and sweeping. After cleaning, as described, the floor must be scrubbed, with soap and water to which may be added the same disinfectant solution.

(d) Closet floors, urinals, toilet bowls and walls must be cleaned by washing, scouring and wiping with an approved disinfectant solution, to which soda ash or other cleansing agent may be added.

(e) All arms of seats and window ledges must be wiped free of dust with a damp cloth (preferably one wet with disinfectant solution).

(f) Provided, that where the vacuum cleaning apparatus is installed and coaches are thoroughly cleaned with this method daily, the aforementioned method of brushing, cleaning and scrubbing may be used as seldom as once in each period of seven days.

Regulation 7. Interurban and Street Cars to be Washed, Disinfected, etc.—Interurban cars and street cars must be washed with a hose and scrubbed thoroughly twice every week, and must be disinfected with formaldehyde gas under the supervision of the local health authority immediately after any case of contagious disease has been discovered therein.

Regulation 8. Sleeping Cars to be Cleaned; Disinfected.—All sleeping cars shall be cleaned at cleaning terminals according to the methods set forth in Regulation 6 above, at least twice during a period of every seven days; shall be disinfected with formaldehyde gas at least twice during a period of seven days; upon routes designated by the Secretary of the State Board of Health, all sleeping cars shall be disinfected as seldom as once during a period of seven days. In addition to the foregoing, all sleeping cars shall be disinfected immediately after any case of contagious or infectious disease is discovered therein. All blankets used in sleeping cars must be thoroughly sterilized and washed at intervals at not more than ninety days.

Regulation 9. Record of Disinfection to be Kept and Signed.—On each passenger car operated in the State of South Carolina a disinfection record must be kept and preserved, and on the same the following records are to be entered and kept, viz.:

1. Place and date of each disinfection.
2. Length of time devoted to each such thorough disinfection.
3. Each item in said record shall be inserted immediately after each act recorded, and the signature of the person or persons doing said cleaning or disinfection must appear beneath the said records.

Regulation 10. Water Coolers to be Provided; Manner of Cleaning.—All depots, railway coaches, sleeping cars, or interurban cars must be provided with a water cooler for the use of patrons and the traveling public; such water cooler must be so constructed as to be easily removed for the purpose of cleaning;

must be emptied, rinsed and cleaned, and must be scalded and sunned when possible once in each period of twenty-four hours, and must be filled with good and wholesome drinking water when in service. Ice for use in water coolers must not be dumped on floors, sidewalks or car platforms. It must be washed and must be handled with ice tongs.

Regulation 11. Expectoration on Floors Prohibited.—Expectorating on the floors or walls or furniture of any waiting room in any depot, or any depot platform, in any railway coach car, sleeping car, interurban car, or street car in this State is prohibited. Placards calling attention of passengers and employees shall be hung in a conspicuous place in each of the aforementioned rooms and cars.

Regulation 12. Expectoration in Basins Prohibited.—Brushing of teeth or expectorating in basins used for lavatory purposes is prohibited, and placards calling attention of passengers and employees shall be hung in a conspicuous place in the dressing room of passenger coaches.

Regulation 13.—Water Closets to Be Provided.—All depots and railway stations shall provide adequate urinals and water closets for patrons and the traveling public; must keep them in proper sanitary condition, and, if within five hundred feet of any public sewer, must make permanent sanitary connection with same. Any privy or box closet furnished by any such railway company shall be protected from flies by screening or other effective method, including hinged lids or other device for covering the opening in the seats of said closets. Such privies and closets as are not in connection with a sanitary sewer shall be provided with a water-tight metal container (receptacle) underneath, which shall be emptied when full or at any time when its condition shall create a nuisance or become unsanitary, and in no instance shall such box-closet go longer than one month before it must be emptied and disinfected with 5 per cent. carbolic acid solution or other approved disinfectant solution.

Regulation 14. Railway Premises Shall be Drained.—The premises of all depots and railway stations shall be thoroughly drained, so that no stagnant water will collect on said premises.

Regulation 15. Cisterns, etc., Shall be Screened.—All cisterns, fire water barrels, or other water containers upon the premises of any depot or railway station shall be screened with not less than 16-mesh wire gauze.

Regulation 16. The Use of the Common or Public Drinking Cup.—The use of the common or public drinking cup is prohibited on all public conveyances and in waiting rooms.

Regulation 17. The Common Roller Towel Shall be Abolished.—The common roller towel shall be abolished on all common carriers and in waiting rooms.

Regulation 18. No Person Shall Spit on the Floor, Furnishings, etc.—No person shall spit on the floor, furnishings or equipment of any public conveyance, eating room, depot, depot platform, waiting room, deck or wharf. Each common carrier is hereby required to post and display in each day coach, smoking apartment or boat a placard in form as follows:

For Cars.—Spitting or throwing of refuse on the floor, furnishings or vestibule of this car is prohibited by law.

Waiting Rooms, Eating Rooms, Toilets.—Spitting or throwing of refuse on the floor or furnishings of this room is prohibited by law.

Boats.—Spitting or throwing of refuse on the deck, floors or furnishings of toilet rooms of this boat is prohibited by law.

HOTELS, RESTAURANTS, CAFES, BOARDING AND LODGING HOUSES.

Regulation 1. Any proprietor of any hotel or boarding house kept in this State, and capable of accommodating more than seventy-five boarders or lodgers, shall keep a cart well covered and so constructed as to be capable of carrying off all the slops and offals from said hotel, as well as the sewerage from their water closets and privies, without emitting any offensive odors, at the hour hereinafter designated; provided, this does not apply to towns with adequate sewerage, and proper provisions for disposal of garbage.

Regulation 2. It shall be the duty of the proprietor of every such hotel or boarding house to cause all such slops, offals and sewerage from their respective establishments to be removed in a cart, constructed as aforesaid, and emptied at a point designated by the local health authorities.

Regulation 3. It shall be unlawful for any person, persons, firms or corporations to empty, or cause to be emptied, the slops or offals of their respective establishments in the streets.

Regulation 4. No owner, lessee, or keeper of any tenement house, lodging house, boarding house, or manufactory, shall

cause or allow the same to be overcrowded, or cause or allow so great a number of persons to dwell or sleep in such house, or any portion thereof, as thereby to cause any danger or detriment to life or health.

Regulation 5. Every person who shall be the owner, lessee, or keeper or manager of any tenement house, boarding house, lodging house, or manufactory, shall provide, or cause to be provided, for the accommodation thereof, and for the use of the tenants, lodgers, boarders, and workers thereat, adequate privies or water closets, and the same shall be so adequately ventilated and shall at all times be kept in such cleanly and wholesome condition as not to be offensive, or be dangerous or detrimental to life or health. And no offensive smell or gases, from or through any outlet or sewer, or through any such privy or water closet, shall be allowed by any person aforesaid to pass into such house or any part thereof, or into any other house or building.

Regulation 6. For all lodging houses a permit in writing from the local Board of Health shall be required, and no person shall have, lease, let or keep any such lodging house or the lodgings therein, or assist in the keeping, hire, or assist in hiring, or conduct the business of any such lodging house, or the lodgings therein, except pursuant to the terms and conditions of a permit in writing previously obtained therefor from the said Board of Health, an application for which shall be made in accordance with the rules and regulations of the Board of Health by the person or persons who propose to use the same. The beds in all lodging houses and in every room of same shall be kept in a cleanly condition.

Regulation 7. All hotels shall hereafter provide each bed, bunk, cot or other sleeping place for the use of guests with pillow slips, under and top sheets, the under sheet to be of sufficient size to completely cover the mattress thereof, the top sheet to be of at least equal width and to be at least ninety-six inches long, and folded back at the head so as to cover all such top covering. Said pillow slips and sheets must be made of white cotton or linen, and all such pillow slips and sheets after being used by one guest must be washed and ironed before being used by another guest, a clean set being furnished each succeeding guest.

Regulation 8. In all cities, towns or villages where a system of waterworks and sewerage is maintained for public use, every hotel therein, shall, within six months after the passage of this

Act, be equipped with suitable water closets for the accommodation of its guests, which water closet shall be connected by proper plumbing with such sewerage system, and there shall be some means of flushing said water closet with the water of said system in such manner as to prevent sewer gas from arising therefrom. The wash bowls in the main wash room of such hotel must be connected and equipped in similar manner, both as to method and time.

Regulation 9. In all towns and villages not having a system of waterworks, every hotel not provided with waterworks and wash rooms as in preceding section provided, shall have properly constructed privies as approved by the State Board of Health, the same to be kept in sanitary conditions at all times.

Regulation 10. No owner or lessee of any building, or any part thereof, shall lease or let, or hire out the same or any portion thereof, to be occupied by any person, or allow the same to be occupied, as a place in which, or for any one, to dwell or lodge, except when said buildings or such parts thereof are sufficiently lighted, ventilated, provided and accommodated, and are in all respects in that condition of cleanliness and wholesomeness, for which they or either of them require any such premises to be kept.

Regulation 11. Nor shall any such person rent, let, hire out, or allow, having power to prevent the same, to be used as, or for, a place of sleeping or residence, any portion or apartment of any building, which apartment or portion has not at least two feet of its height and space above the level of every part of the sidewalk and curbstone of any adjacent street, nor of which the floor is damp by reason of water from the ground, or which is impregnated or penetrated by any offensive gas, smell or exhalation prejudicial to health; but this section shall not prevent the leasing, renting, or occupancy of cellars or rooms less elevated than aforesaid, and as a part of any building rented or let, when they are not let or intended to be occupied or used by any person as a sleeping apartment, or as a principal or sole dwelling apartment.

Regulation 12. Every owner, lessee and tenant and manager of any boarding house or manufactory, shall cause every part thereof, and its appurtenances to be put, and shall thereafter cause the same to be kept, in a cleanly and wholesome condition, and shall speedily cause every department thereof in which any

person may sleep, dwell, or work, to be adequately lighted and ventilated; and, if the same be a manufactory, shall cause every part thereof in which any person may work, to be maintained at such temperature, and be provided with such accommodation and safeguards, as not, by reason of the want thereof, or of anything about the condition of such manufactory or its appurtenances, to cause any unnecessary danger or detriment to the life or health of any person being properly therein or thereat.

Regulation 13. The walls and ceilings throughout any tenement or lodging house shall be thoroughly whitewashed or painted, papered or kalsomined as required by the Board of Health, and not less than once in each year.

Regulation 14. Every keeper or proprietor of a hotel or boarding house, and every other person having for use a bathing house upon any beach or shore of the ocean, for the accommodation of his guests, or of other persons for pay, shall provide for the safety of such bathers two lines of sound, serviceable and strong manila or hemp rope, not less than one inch in diameter, anchored at some point above high water, at the same distance apart as the line of bathing houses, or space fronting on such beach occupied by them is in width; and from the two points at which such life lines are so anchored, such line shall be made to extend as far into the surf as bathing is ordinarily safe and free from danger of drowning to persons not expert in swimming, and at such points of safety such lines shall be anchored and buoyed. From the two points of such lines so extended, anchored and buoyed, a third line shall be extended, connecting the two extremities, and buoyed at such points as to be principally above the surface of the water, thereby enclosing a space within such lines and the beach within which bathing is believed to be safe. Every such keeper or proprietor or other such person shall cause to be painted and put up, in some prominent place upon the beach, near such bathing houses, the following words: "Bathing beyond the lines is dangerous." Such lines so placed, anchored and buoyed, and such notices so put up, shall continue and be so maintained by every such keeper, proprietor or other persons, during the entire season of bathing. The owner of a bathing house shall not be subject to the provisions of this section where it is used, occupied or maintained by a lessee for hire, but such lessee shall be deemed the keeper or proprietor thereof.

Regulation 15. No hotel, lodging or boarding house, restaurant, shall be maintained in the State of South Carolina that has not a properly screened dining room, kitchen, bed rooms, toilet rooms and pantries.

Regulation 16. Every hotel, lodging or boarding house and restaurant in South Carolina shall keep its kitchen and pantry in a sanitary condition, and if said hotel, etc., shall be found in unsanitary condition, it shall be closed by State Board of Health or its properly accredited officer until unsanitary conditions are remedied.

Regulation 17. All hotels, boarding houses, lodging houses, restaurants in South Carolina that are not in towns shall provide pure drinking water and shall submit samples to the State Board of Health chemist, quarterly, for analysis.

There being no further business the Board adjourned at 6 p. m. to meet at the call of the Chairman.

JAMES A. HAYNE, M. D.,
Secretary.

Attested.

Columbia, S. C., July 24th, 1912.

The regular quarterly meeting of the Executive Committee of the State Board of Health was held this day at its office, 3 p. m., with the following members present: Drs. D. B. Frontis, C. C. Gambrell, E. A. Hines, W. M. Lester, W. W. Dodson, W. J. Burdell and the Secretary and State Health Officer.

A full report was given by the Secretary and State Health Officer, Jas. A. Hayne, of his work for the past quarter, which was as follows:

February 15th, the Secretary visited Westminster and Seneca in response to a call from Dr. E. A. Hines and saw two cases of cerebro-spinal meningitis, one at Westminster and one at Seneca. He also gave an address to the school children at Seneca on Matters of Public Health. February 27th he visited a case of small-pox at Cayce's. Quarantined the patient and vaccinated those exposed to the disease. March 3rd he visited Stover, Chester County, where quite a number of cases of smallpox were found. On March 4th, visited the City of Chester in response to an invitation from the County Medical Association and delivered an address. March 5th, the State Health Officer visited the City of Spartanburg and delivered an address to the Civic League of

that city on Municipal Sanitation. March 7th, was called to Branchville, where there was a case of smallpox. March 13th he was called to Allendale to investigate certain unsanitary conditions of that town at the request of the citizens. Then went to Beaufort to investigate a case of smallpox at Beaufort and Port Royal. Quite an extensive epidemic was found to exist on St. Helena and Daufaxki Islands. The Secretary employed a special agent to vaccinate all the people of these islands. On the 14th the Secretary visited Ridgeland at the request of Mrs. M. C. Butler, whose land was much injured by improper drainage of neighboring plantations. March 21st the Secretary visited Bullock Creek, in York County, where smallpox was epidemic, but through the courtesy and assistance of Dr. Saye, of Sharon, was enabled to vaccinate the majority of the people exposed to the disease. On the 25th he was called to Cayce's, where smallpox had again made its appearance. On the 27th, visited Boykin, Kershaw County, where a case of smallpox had developed. On April 1st, he visited a case of smallpox just outside the city limits of Columbia and made a trip to St. Matthews and saw the County Commissioners and induced them to appropriate money, for the carrying on of a hookworm campaign in Calhoun County. On the 4th, he made a trip to Hickory Grove, York County, to investigate smallpox prevailing there, and on the 8th a trip to Little Mountain, where there were several cases of smallpox. On the 10th he visited Darlington at the request of the City Board of Health and made a sanitary survey of the dairies at Darlington and formulated for the city certain rules for the management of the dairies. On the 13th, he made a trip to Prosperity, where there was smallpox.

On April 29th, the Secretary was called to Greenville to consult with the local Board of Health in regard to drainage of meadow and other sanitary matters. He appeared before the City Council of Greenville and made recommendations to that body in regard to the stamping out of malaria in that city. On May 1st, he visited Anderson, where there was a case of cerebrospinal meningitis and conferred with the local Board of Health as to methods of preventing further cases from developing. On the 4th he visited New Brookland, where a case of smallpox was. On the 9th, he went to Jacksonboro to see a case of smallpox. On the 13th, went to Lancaster and recommended to the City Board of Health certain measures in regard to a more sanitary disposal

of sewerage and garbage. On the 15th, in company with Mr. A. H. Jennings, he made an investigation of the malaria at the request of the citizens of Eau Claire, Richland County, and found that the malaria there present was probably due to badly drained meadows near there and not due to Ridgewood Lake. On the 16th, he visited Blackville and conferred with the local Board of Health in regard to a more sanitary disposal of the sewerage of that town. On the 18th, he delivered a lecture to the public school children at Lexington. On the 20th, he visited the City of Florence and made an investigation of their water supply and recommended that a new basin be built for the water from the artesian wells as the present basin is contaminated and the water was then unfit for drinking purposes. On the 28th, he visited Lake City and gave an address to the Civic League of that town. On the 31st, he went to Washington to a conference of State and Territorial Boards of Health with the United States Public Health Service. On the 3rd of June he went to Atlantic City to a meeting of the American Medical Association. On the 14th there were quite a number of cases of typhoid fever in the town of Hartsville. On the 17th, he went to Spartanburg to a conference with Dr. Siler in regard to pellagra; he then went to Greenville to investigate the sanitary conditions of the Union Bleachery. On the 21st, he visited Bishopville by request of the Grand Jury and inspected a fish pond in Lee County which was said to be producing malaria. It was decided that it was not necessary to drain this pond, as the malaria complained of was probably due to stagnant water nearer the complainant's home than the fish pond. On the 28th, he went to Blaney, where smallpox was present. July 2nd, the Secretary went to Blackville and gave an address to the District Medical Association. On the 10th, he went to Ridge Springs and gave an address to the Eighth District Medical Association. On the 12th, he visited Sumter and inspected the county jail and recommended isolation of cases of tuberculosis and other contagious diseases. The jail there did not have proper conveniences for the number of prisoners confined there. On the 13th, he visited Bennettsville and gave an address to the Farmers' Institute on General Sanitation and that night gave a lecture on Sanitation at McColl.

It was moved by Dr. Gambrell that this report be received as information. This motion was amended with the consent of Dr. Gambrell by Dr. Hines, seconded by Dr. Burdell, that a vote of

commendation be taken, and that the State Board of Health express its appreciation of the efficient work performed by the Secretary and State Health Officer.

Dr. Thos. R. Crowder, Superintendent of Sanitation of the Pullman Company, appeared before the Board and brought out some objections to the rules and regulations of the State Board of Health regarding sleeping cars. The Board decided to take up these objections at its next regular meeting.

JAMES A. HAYNE, M. D.,
Secretary.

Attested.

Columbia, S. C., Aug. 20th, 1912.

A special meeting of the Executive Committee of the State Board of Health was held this day at its office and was called to order at 3 p. m. by the Chairman, Dr. Robt. Wilson, Jr., with the following members present: Drs. Wilson, Frontis, Gambrell, Hines, Egleston, Lester, Dodson and the Secretary of State Health Officer.

The purpose of this meeting was to consider and adopt regulation governing schools and State Penal Institutions. The following regulations were adopted, and the Secretary instructed to have them printed in pamphlet form as soon as possible, and later to publish all these regulations and legislative Acts relating to public health in South Carolina.

The matter of paying for express and printing of circulars, etc., for the Rockefeller Commission was taken up, and it was moved by Dr. Gambrell and seconded by Dr. Hines that these expenses be paid by the Board of Health.

It was moved by Dr. Gambrell and seconded by Dr. Egleston that the Chairman of the Board designate two members and two alternates to represent the State Board of Health at the International Congress on Hygiene and Demography to be held in Washington, September 23-28. The Chairman designated Drs. Gambrell and Egleston with Drs. Lester and Frontis, alternates, their necessary traveling expenses to be paid out of the contingent fund.

The Secretary was authorized to buy typhoid bacterin when the laboratory was unable to supply sufficient quantity, but to endeavor to have same furnished by the laboratory.

There being no further business the Board adjourned at 5 p. m. to meet again in October at the call of the Chairman.

JAMES A. HAYNE, M. D.,
Secretary.

Attested.

Columbia, S. C., Oct. 3rd, 1912.

The regular quarterly meeting of the Executive Committee of the State Board of Health was held this day at its office, 9 a. m., with the following members present: Dr. Robt. Wilson, Jr., Chairman; Drs. D. B. Frontis, E. A. Hines, W. J. Burdell, Wm. Egleston, W. M. Lester, W. W. Dodson and the Secretary and State Health Officer.

The minutes of special meeting held August 20th were read and adopted. After some discussion by Dr. Egleston in regard to the regulations for quarantine and disinfection (adopted August 20th, 1912,) the following additions were made: To Rule 16, "Any modification or addition of above rules by any local health authority shall first be submitted to the Executive Committee of the State Board of Health for approval before such rule or rules shall be lawful." To Rule 30, "and shall be approved by the Executive Committee of the State Board of Health before becoming law. The Board decided to publish as early as possible a Code comprising the laws now existing that govern actions of the State Board of Health.

The Secretary and State Health Officer gave a verbal report of his work for the past quarter.

There being no further business the Board adjourned to meet at the call of the Chairman.

JAMES A. HAYNE, M. D.
Secretary.

Attested.

Columbia, S. C., December 12th, 1912.

The regular quarterly meeting of the Executive Committee of the State Board of Health was held this day at the Board's office and called to order by the Chairman at 3 p. m. with the following members present: Dr. Robt. Wilson, Jr. (Chairman), Drs. D. B. Frontis, C. C. Gambrell, E. A. Hines, W. J. Burdell, Wm. Egleston, W. M. Lester, W. W. Dodson and the Secretary and State Health Officer.

The reports of the Standing Committees on Ordinances and Sanitary Code—Epidemic and Endemic Diseases—Registration of Vital Statistics—Sanitary Condition of State and Penal and Charitable Institutions—Sanitary Inspection of Schools—Local and Sub-Boards of Health were received and will be published in the annual report, also report of Dr. Coward, Director of Laboratory, showing work done in the laboratory during the year. Dr. Coward's report was very full, and the discussion following its reading, recommended that Dr. Coward's suggestion in regard to the muzzling of dogs and the isolation of animals bitten by supposed animals infected by hydrophobia be made a regulation of the State Board of Health. In view of the very efficient service rendered by Dr. Coward, it was moved by Dr. Lester, seconded by Dr. Gambrell, that his salary be increased to \$208.33 per month, should funds permit. The motion was unanimously adopted.

Plans were submitted for drainage and sewerage of the State Park. The plans were approved and recommended by the State Board of Health.

Upon motion of Dr. Gambrell, duly seconded, the following committee was appointed to review our regulations and provide for printing of code. The Committee was Drs. Wilson, Lester and Egleston. It was decided that a special meeting of the Board should be held December 31st, at 9 a. m., in order to take up the revision of these regulations.

Motion by Dr. Lester, duly seconded, the Secretary was instructed to employ extra clerical force and pay for same out of the contingent fund to the extent of \$50.00 per month, if so much be necessary.

There being no further business, the Board adjourned to meet December 31st, at 9 a. m.

JAMES A. HAYNE, M. D.,
Secretary.

Attested.

Columbia, S. C., December 31st, 1912.

A special meeting of the Executive Committee of the State Board of Health was held this day at the Board's office at 9 a. m., December 31st, 1912, and called to order by Robert Wilson, Jr., Chairman. The following members were present: Dr. Robt. Wilson, Jr. (Chairman), Drs. C. C. Gambrell, E. A. Hines, W. J.

Burdell, Wm. Egleston, W. M. Lester, W. W. Dodson and the Secretary and State Health Officer.

The purpose of the meeting was to revise rules and regulations already promulgated in regard to Quarantine and Disinfection, Schools, Jails and Penal Institutions, Railway Coaches, Depots, Sleeping Cars, Street Cars and Interurban Cars and Hotels, Restaurants, Cafes, Boarding and Lodging Houses. Several amendments were made and the Secretary was instructed to issue a code as soon as possible comprising these laws.

A bill was presented for Mr. Richard Singleton for antitoxin furnished him by McGregor's Drug Store. This drug store being out of the antitoxin furnished by the State Board of Health, the Secretary was instructed to refund to Mr. Singleton forty cents (40c.) per one thousand (1,000) units of the antitoxin used. He was also instructed to refund \$2.00 to Robt. D. Bradford for antitoxin, five thousand (5,000) units furnished him by Sibert's Drug Store in Sumter.

The Secretary was instructed to accompany Dr. W. A. Boyd, City Health Officer for Columbia, and inspect the City Market, and report on its sanitary condition. There being no further business, the Board adjourned.

Attest.

JAMES A. HAYNE, M. D.,
Secretary.

REPORT OF STANDING COMMITTEES.

REPORT OF COMMITTEE ON SANITARY INSPECTION OF SCHOOLS.

Columbia, S. C., Dec. 13, 1912.

Mr. Chairman: In response to the request of Dr. E. A. Hines, Chairman of the committee to inspect the educational institutions of the State, I visited the State Normal Colored Industrial College at Orangeburg on Nov. 29th, 1912.

Halls, recitation rooms, offices, dormitories and closets were all found clean and well kept. The dining room and kitchen were especially clean and sanitary, showing careful and systematic attention to detail. At the time of this inspection, the windows in dining room and kitchen were not screened, but President Wilkinson said the screens were then being made in the industrial department and he hoped to have them installed in two weeks.

He was advised to have the screens for the kitchen made to full size of the windows of sixteen-mesh wire, and tightly fitted, so as to absolutely prevent the ingress of flies.

The dairy was visited at the milking hour. The herd was in excellent condition. The milk buckets were scalded and udders washed before milking. The milkmen were cleanly dressed and I was assured that proper attention was always paid to their personal cleanliness when they did this work. The milk house was also well kept and clean, but not well screened. The arrangements for scalding and cleansing milk vessels and bottles was fairly good. A cream separator of approved pattern is used. I found no aerator, and urged that one be installed at once. While all the milk is immediately used or sold, there can be no doubt that the use of an aerator, as soon as the milk is brought in from the shed, renders it more wholesome by inhibiting bacterial development. The cost of an aerator is trifling in comparison to the advantage gained. Seven or eight dollars would supply a cold water aerator of sufficient capacity for this institution.

The barn is poor and the location abominable from a sanitary standpoint. The drainage from the barn gravitates into a basin between the barn and the main building of the institution; from this there is no outlet except by a sewer. This basin is about one hundred and fifty feet from the kitchen and dining room. There is an excellent location for the barn a little farther away from the buildings with natural drainage away from these, and for the protection of the health of the inmates of this institution the State should make this change at once.

The water supply is the same as for the City of Orangeburg and is presumably pure. Enquiry into the food supply of the institution elicited nothing to criticism.

No serious case of sickness has occurred in the institution this year.

The Citadel of Charleston was inspected by Dr. Robt. Wilson. The sanitary conditions of this institution were reported good last year, the only criticism made was in regard to the use of the common drinking cup. This has been abolished and, therefore, there is no suggestion to make at present.

Respectfully submitted,

Columbia, S. C., Dec. 13, 1912.

SANITARY INSPECTION OF CLEMSON COLLEGE.

Inspection Made by Drs. Hines and Burdell.

Generally speaking, we find the sanitary conditions of this institution are very good. The new dairy building and the new cow barn have been completed and are in service. The sanitary arrangements and conditions of these buildings are excellent. The use of these buildings removes all criticisms heretofore made by your committee in this respect. The auxiliary water supply drawn from the creek that we have criticised before, still remains. The principal need of this institution is the hospital. This building is out of date and totally inadequate for such an institution. We find the health of the students very good, except that they have had an epidemic of grippe during the beginning of this session and several cases of appendicitis. Plans are on foot for a better and more sanitary arrangement of the arrangements for hog feeding. We commend these plans and urge that they be carried out as soon as possible.

Columbia, S. C., Dec. 13, 1912.

SANITARY INSPECTION OF THE UNIVERSITY OF
SOUTH CAROLINA.

By Drs. Burdell and Frontis.

We find the sanitary conditions of the University of South Carolina very good generally, but we would urge the installation of the central heating plant as early as possible. This being perhaps the most crying need of this institution. We would urge that when this plant is installed, that the toilet buildings be heated. In this connection we wish to call attention to the fact that several of the closets are broken and should be replaced or repaired. The closets are of the type that we criticised in our last report. At the Infirmary we find that they have had one case of scarlet fever, which is at present in the hospital, and one case of typhoid fever that is now convalescing. We would recommend that the southeast porch of the Infirmary be enclosed with screens and sash so as to get a sun-parlor that may be used as an isolation ward. This ward should have toilet facilities connected. At the Steward's Hall we find that the kitchen and butler's pantry are totally inadequate. They are feeding there an

average of one hundred and seventy (170) students daily and their kitchen space is only sufficient for about one hundred (100). We would strongly urge that close attention be paid to the deficiency of the sinks and that the sweeping in the dining room only be done after the floor is moistened. We would earnestly recommend that the dining room be enlarged, that a new kitchen be built with all modern facilities, that automatic dish washers be installed and with new and larger sinks. We also recommend the building of a servant's room and laboratory and servant's dining room. The butler's pantry should be enlarged. We find the usual criticism as to the students not flushing the closets after using them and in a little talk made to the student body at chapel, we urged that they not neglect this very important point.

REPORT OF COMMITTEE ON SANITARY CONDITIONS OF STATE AND CHARITABLE INSTITUTIONS.

Chairman State Board of Health:

Your Committee on State Charitable and Penal Institutions begs leave to make the following report:

On December 12th we visited the State Hospital for Insane. We inspected the wards and found them clean and in a very sanitary condition. The dining rooms are clean, screened and in a sanitary condition. Since our last inspection several of the open porches have been enclosed, and are now being used for sleeping quarters. This adds very much to this institution, for they are very much in need of additional sleeping quarters. We again draw attention to the crowded condition of this institution, and urge that as soon as practicable the new quarters at State Park be used.

STATE PARK.

We inspected the new building at State Park, and found that it is being well constructed, and found that those who have this work in charge have made every provision for perfect sanitation. The plans for the sewerage disposal were submitted to us and approved. We would recommend that the next General Assembly definitely establish the policy of this institution so that the work can be pushed more rapidly and the races segregated as soon as possible.

PENITENTIARY.

Mr. Chairman:

On December 12th your Committee on State Charitable and Penal Institutions visited the Penitentiary. We beg leave to report that the general sanitary condition of this institution is very good, in fact very much improved since our last inspection.

The old building, in which the women are housed, is still in use. It is now kept cleaner than formerly, but we are still of the opinion that these quarters are unsanitary and should be replaced by a new and sanitary building, suitably constructed to maintain both the sick and well. Some provision should also be made to take care of the tubercular women, and not have them intermingling with the other prisoners. We found in these quarters two children that some provision should be made for. We were assured by Superintendent Griffith he would have new quarters for the women, and he was now working on the plans for such quarters.

GENERAL HOSPITAL.

The General Hospital was very clean and in very good sanitary condition, but it is old and out of date for an institution of this kind. We would recommend that a new and perfectly sanitary building be procured, and that it be used only for the sick. The old building is now being used for sleeping quarters for the trustees.

HOSIERY MILL.

This institution is still very much overcrowded, and while more attention is being paid to the general sanitary condition, we would reiterate our former opinion that this form of occupation is not conducive to good health, and should not be indulged in by the State of South Carolina.

Respectfully submitted,

C. C. GAMBRELL,
Chairman.

REPORT OF INSPECTION AT WINTHROP COLLEGE.

We visited Winthrop College on Monday, Nov. 25th. Since last visited a year ago a considerable number of important im-

provements have been undertaken and are in the course of construction. An addition to the infirmary, practically doubling its size, will shortly be completed. This addition, together with the improvements of the old building, will give the college one of the most up-to-date hospitals in the South. The college has been forced to provide its own sewerage system from its foundation, but within the year the city sewerage has been tapped, thus increasing the sanitary efficiency of the entire institution. Two new deep wells have been bored, giving added supply for drinking purposes. All of the drinking water is analyzed frequently. A magnificent training school is in course of construction, embodying the very latest ideas as to heating, ventilation, etc. Provision will be made in this building for daily medical inspection of any pupils in the graded and high school suspected of contagious or infectious diseases. Examining rooms and offices being designed for this purpose. This building alone will be an invaluable object lesson to pupils and visitors, particularly on the problems of preventive medicine.

The health of the student body has been exceptionally good. There has been no case of typhoid fever in some four or five years. At the time of our visit there were only two or three cases in the hospital, and those were cases of malarial infection, imported from the lower part of the State. The food supply we examined carefully, as well as the methods of preparation. With all of the details we were highly pleased. This particular phase of the institution receives great care and consideration from a health point of view. The authorities of the college appeared to be more than anxious to receive and act upon every practicable suggestion looking to the conservation of the health of the institution. Our recommendations were necessarily very few. We advised a slightly more effective plan of screening the lavatories and discussed the question of the value of screens as a preventive of disease in a very satisfactory manner with the President and local physician. The cow barn and dairy give evidence of increasing care.

There appeared to be much to commend and little to criticise about the premises. Slight changes with reference to screens and the surface closets in the vicinity were advised.

Respectfully submitted,

E. A. HINES, M. D.,
W. J. BURDELL.

Report of F. L. Parker, M. D., Chemist and Bacteriologist, Charleston, S. C.

WATER ANALYSES.

Charleston, S. C., Dec. 21, 1912.

To the Chairman and Members of the Executive Committee of the State Board of Health of South Carolina.

Gentlemen: I have the honor to submit the following report of analyses of samples of water from the public water supplies of South Carolina, made under the direction of the State Board of Health, in accordance with an Act to protect and secure the purity of the water supply of towns and cities; and of samples submitted by Winthrop Normal and Industrial College.

A total of 126 samples of water were received from the public water supplies for sanitary chemical and bacterial analyses. Of these 8 showed positive chemical or bacterial indications of contamination. The samples received from Winthrop Normal and Industrial College showed no indications of contamination.

In a number of cases the first samples which were received showed either chemical or bacterial indications of contamination. In each of these cases other samples were called for for check analyses; and all probable sources of contamination were carefully investigated.

With the exception of two supplies, to which your attention has been called from time to time, the quality of the water from the various public supplies is excellent, and every effort is apparently made to remove potentially dangerous sources of contamination, and to maintain the purity of the supplies.

The following is a tabulated report of the source, average capacity and daily consumption of each public supply and analyses of same.

Respectfully submitted,

F. L. PARKER, JR., M. D.
Chemist and Bacteriologist.

RESULTS IN PARTS PER MILLION.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
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Water Supply of Abbeville, S. C.

Abbeville Water and Electric Plant, owned by City.

Source: Branch. Distance from City, 1½ miles. Capacity 400 to 500 Gallons Per Minute. City Consumption 125,000 Gallons Filtered Per Day.

December 20, 1911	4.00	0.01	0.03	0.00	0.00	117.00	Negative	Negative
March 11, 1912	4.00	0.04	0.03	0.001	0.00	17.00	Negative	Negative
June 8, 1912	3.00	0.04	0.06	0.01	0.00	63.00	Negative	Negative
September 11, 1912	5.00	0.01	0.05	0.001	0.00	105.00	Negative	Negative

Water Supply of Alken, S. C.

Owned by City.

Source: Wells 535 Feet Deep. Diam. 1-8"; 1-10". Does Not Flow. City Consumption 140,000 Gallons Per Day.

December 28, 1911	14.00	0.005	0.01	0.00	0.00	138.00	Negative	Negative
March 29, 1912	13.00	0.01	0.01	0.00	0.00	120.00	Negative	Negative
June 12, 1912	3.00	0.01	0.02	0.00	0.00	63.00	Negative	Negative
October 4, 1912	5.00	0.02	0.03	0.01	0.00	69.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.

	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as Ni- trates.	Nitrogen as Ni- trites.	Total Solids.	Chemical Indica- tions of Contam- ination.	Bacterial Indica- tions of Contam- ination.
Water Supply of Anderson, S. C.								
Anderson Water, Light & Power Co.								
Source: 80 Driven Wells, 2 Inches in Diameter and From 35 to 75 Feet Deep. Capacity 250,000 Gallons Per Day. Stream Has Capacity of About 1,500,000 Gallons Per Day. Filtered. Capacity of Filter 650,000 Gallons Per Day.								
December 16, 1911	2.00	0.02	0.02	0.00	0.00	42.00	Negative	Negative
March 12, 1912	2.00	0.03	0.05	0.00	0.00	68.00	Negative	Negative
September 11, 1912	3.00	0.02	0.06	0.01	0.00	90.00	Negative	Negative
Water Supply of Beaufort, S. C.								
Owned by City.								
Source: Well 120 Feet Deep. Diam. 10". Flow 40,000 Gallons Per Hour. City Consumption 30,000 Gallons Per Day.								
January 13, 1912	21.00	0.05	0.02	0.00	0.00	240.00	Negative	Negative
March 27, 1912	23.00	0.08	0.05	0.10	0.00	195.00	Negative	Negative
June 21, 1912	23.00	0.30	0.05	0.00	0.00	198.00	Negative	Negative
June 27, 1912	23.00	0.16	0.06	0.00	0.00	202.00	Positive	Positive
October 2, 1912	26.00	0.07	0.06	0.00	0.00	230.00	Negative	Negative
Water Supply of Bennettsville, S. C.								
Owned by City.								
Source: 8 Wells at Electric Light & Water Plant, Which Is Pumping Station. Diameter 4 Inches. Average Depth 60 Feet.								
December 21, 1911	5.00	0.02	0.04	1.00	0.00	20.00	Negative	Negative
March 16, 1912	5.00	0.03	0.03	0.30	0.00	45.00	Negative	Negative
June 11, 1912	5.00	0.01	0.03	0.30	0.00	39.00	Negative	Negative
September 11, 1912	6.00	0.04	0.05	0.05	0.00	75.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as NI- trates.	Nitrogen as NI- trates.	Total Solids.	Bacterial Indica- tions of contam- ation.	Chemical Indica- tions of Contam- ination.
Water Supply of Camden, S. C. Camden Water, Light & Ice Co. Source: Six Springs in City. Diam. 4x4". Capacity 200,000 Gallons Per Day Filtered.								
March 28, 1912	4.00	0.02	0.06	0.00	0.00	41.00	Negative	Negative
June 22, 1912	2.00	0.005	0.08	0.00	0.00	64.00	Negative	Negative
September 11, 1912	5.00	0.01	0.04	0.05	0.00	35.00	Negative	Negative
September 19, 1912	6.00	0.02	0.05	0.02	0.00	30.00	Negative	Negative
Water Supply of Charleston, S. C. Charleston Light & Water Co. Source: Goose Creek, 12 Miles from City. This is an Impounded Supply, the Reservoir Being an Old Tide Water Basin. Filtered by Mechanical Filter. Capacity of Filters 6,000,000 Gals. Per Day. City Consumption 5,000,000 to 6,000,000 Gals. Per Day.								
December 16, 1911	29.00	0.04	0.15	0.00	0.00	125.00	Negative	Negative
March 13, 1912	10.00	0.02	0.14	0.00	0.00	43.00	Negative	Negative
June 5, 1912	10.00	0.02	0.25	0.00	0.00	71.00	Negative	Negative
September 13, 1912	12.00	0.005	0.12	0.00	0.00	175.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.

	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitriles.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
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Water Supply of Chester, S. C.

Owned by City.

Source: Sandy River, 2½ Miles from City.

Rate of Flow, 4,000 Gals. Per Minute. Filtered by Gravity Filters. Capacity of Filters 500 Gals. Per Minute. City Consumption 250,000 Gals. Per Day.

December 14, 1911	7.00	0.006	0.02	0.00	0.00	140.00	Negative	Negative
March 12, 1912	3.00	0.008	0.05	0.00	0.00	122.00	Negative	Negative
June 10, 1912	6.00	0.02	0.06	0.05	0.00	80.00	Negative	Negative
September 12, 1912	8.00	0.010	0.03	0.00	0.00	90.00	Negative	Negative

Water Supply of Clinton, S. C.

Owned by City.

Source: Well in City, 510 Feet Deep. Diam. 8". Pumps 60 Gals. Per Minute. City Consumption 25,000 Gals. Per Day.

January 17, 1912	6.00	0.04	0.06	0.00	0.002	160.00	Positive	Positive
April 5, 1912	7.00	0.01	0.01	0.005	0.00	160.00	Negative	Negative
July 5, 1912	5.00	0.03	0.08	0.005	0.00	180.00	Negative	Negative
October 8, 1912	8.00	0.005	0.01	0.050	0.00	170.00	Negative	Negative

Water Supply of Columbia, S. C.

Owned by City.

Source: Saluda River, 1 Mile from City. Filtered by Mechanical Filter, 40 Pounds Pressure.

December 20, 1911	4.00	0.03	0.02	0.00	0.00	56.00	Negative	Negative
March 4, 1912	3.00	0.02	0.04	0.01	0.00	95.00	Negative	Negative
June 10, 1912	4.00	0.01	0.01	0.10	0.00	75.00	Negative	Negative
September 12, 1912	3.00	0.05	0.02	0.00	0.00	70.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as NI- trates.	Nitrogen as NI- trates.	Total Solids.	Bacterial Indica- tions of Contam- ination.	Chemical Indica- tions of Contam- ination.
Water Supply of Darlington, S. C.								
Darlington Water & Electric Co.								
Source: Well 325 Feet Deep. Diameter 6 inches, in City. Filter Flow 200 Gals. Per Min. City Consumption 100,000 Gals. Day.								
January 9, 1912	3.00	0.01	0.02	0.00	0.00	37.00	Negative	Negative
March 14, 1912	4.00	0.02	0.02	0.00	0.00	42.00	Negative	Negative
June 11, 1912	4.00	0.01	0.01	0.00	0.00	30.00	Negative	Negative
September 10, 1912	4.00	0.005	0.02	0.00	0.00	47.00	Negative	Negative
Water Supply of Easley, S. C.								
Owned by City.								
Source: Several Springs and Small Branches 3-4 Mile from City. Capacity 120 Gals. Per Minute. Filtered.								
June 4, 1912	2.00	0.01	0.02	0.01	0.00	70.00	Negative	Negative
September 30, 1912	2.00	0.005	0.005	0.05	0.00	38.00	Negative	Negative
Water Supply of Florence, S. C.								
Owned by City.								
Source: Well 1,110 Feet Deep in City. Diameter 8". Capacity 100,000 Gallons Per Day.								
December 12, 1911	41.00	0.03	0.04	0.00	0.00	320.00	Negative	Negative
March 13, 1912	43.00	0.10	0.04	0.00	0.01	275.00	Positive	Positive
June, 28, 1912	42.00	0.02	0.03	0.00	0.04	316.00	Positive	Positive
June, 28, 1912	42.00	0.06	0.06	0.00	0.04	231.00	Positive	Positive
September 11, 1912	50.00	0.005	0.05	0.00	0.05	310.00	Negative	Negative
August 8, 1912	50.00	0.074	0.014	0.00	0.02	314.00	Positive	Positive
August 8, 1912	50.00	0.010	0.010	0.00	0.00	312.00	Positive	Positive
August 8, 1912	50.00	0.024	0.020	0.00	0.001	283.00	Positive	Positive

Sample Drawn.

	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
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Water Supply of Gaffney, S. C.

Owned by City.

Source: Cherokee Creek, $2\frac{1}{2}$ Miles from City. Daily Consumption 100,000 Gals.

December 14, 1911	6.00	0.006	0.01	0.00	0.00	64.00	Negative	Negative
March 12, 1912	5.00	0.02	0.06	0.00	0.00	80.00	Negative	Negative
June 11, 1912	7.00	0.01	0.02	0.10	0.00	98.00	Negative	Negative
September 11, 1912	7.00	0.02	0.04	0.00	0.00	74.00	Negative	Negative

Water Supply of Georgetown, S. C.

Black River Water Co.

Source: Black River, 70 Miles by River and 14 Miles by Air Line from City. Filtered by Slow Sand Filter. Capacity of Filter 600,000 Gals. Per Day. City Consumption Average 275,000 Gals. Per Day.

The Water is a Peaty Water and is not Decolorized.

December 15, 1911	8.00	0.02	0.40	0.00	0.00	64.00	Negative	Negative
March 9, 1912	6.00	0.03	0.14	0.00	0.00	37.00	Negative	Negative
June 8, 1912	5.00	0.01	0.40	0.00	0.00	83.00	Negative	Negative
September 13, 1912	8.00	0.03	0.35	0.00	0.00	93.00	Negative	Negative

Water Supply of Greenville, S. C.

Paris Mountain Water Co.

Source: Springs on Paris Mountain, 7 and 12 Miles from City. Capacity 2,500,000 Gals. Per Day. City Consumption 1,200,000 Gals. Per Day.

December 15, 1911	2.00	0.03	0.03	0.00	0.00	20.00	Negative	Negative
March 12, 1912	2.00	0.02	0.03	0.00	0.00	60.00	Negative	Negative
June 12, 1912	2.00	0.005	0.01	0.00	0.00	50.00	Negative	Negative
September 10, 1912	3.00	0.005	0.02	0.00	0.00	55.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as Ni- trates.	Total Solids.	Bacterial Indica- tions of contam- ation.	Chemical Indica- tions of Contam- ination.
Water Supply of Greenwood, S. C.							
Greenwood Water and Electric Light Plant. Source: Well and Springs 1½ Miles from City. Depth 325 Feet. Diam. 8". Pumps 225 Gals. Per Minute. City Consumption 3,000,000 to 5,000,000 Gals. Per Month.							
December 28, 1911	4.00	0.005	0.005	0.00	110.00	Negative	Negative
March 11, 1912	5.00	0.02	0.03	0.00	134.00	Negative	Negative
June 11, 1912	5.00	0.01	0.03	0.00	145.00	Negative	Negative
September 19, 1912	5.00	0.02	0.06	0.00	135.00	Negative	Negative
Water Supply of Graniteville, S. C.							
Owned by Graniteville Mfg. Co. Source: Busby Spring, in Town Limit. Two Reservoirs, One 34 Feet by 34 Feet by 7 Feet, one capacity 40,000 Gals. Rate of Flow 15,000 Gals. Per Day.							
December 18, 1911	2.00	0.02	0.02	0.00	15.00	Negative	Negative
March 13, 1912	2.00	0.02	0.03	0.00	32.00	Negative	Negative
June 10, 1912	2.00	0.02	0.09	0.05	10.00	Negative	Negative
September 11, 1912	4.00	0.005	0.005	0.00	35.00	Negative	Negative
Water Supply of Hartsville, S. C.							
Owned by City. Source: Well ¼ Mile from Center of City. Depth 287 Feet, Diameter 3¼ Inches. Rate of Flow 133 1-3 Gallons Per Minute.							
December 13, 1911	2.00	0.008	0.05	0.00	25.00	Negative	Negative
March 11, 1912	3.00	0.01	0.01	0.00	70.00	Negative	Negative
June 7, 1912	3.00	0.01	0.01	0.00	37.00	Negative	Negative
September 20, 1912	5.00	0.005	0.005	0.00	40.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as Ni- trates.	Nitrogen as Ni- trates.	Total Solids.	Bacterial Indica- tions of Contam- ination.	Chemical Indica- tions of Contam- ination.
Water Supply of Lancaster, S. C. Owned by Town. Source: Creek About 1½ Miles from City. Filtered by Mechanical Filter.								
December 15, 1911	11.00	0.01	0.01	0.00	0.00	35.00	Negative	Negative
March 11, 1912	8.00	0.02	0.05	0.00	0.00	33.00	Negative	Negative
June 10, 1912	8.00	0.01	0.03	0.05	0.00	61.00	Negative	Negative
September 23, 1912	7.00	0.01	0.04	0.00	0.00	75.00	Negative	Negative
Water Supply of Laurens, S. C. Owned by City. Source: River About a Half Mile from City. Filtered.								
December 15, 1911	3.00	0.006	0.01	0.00	0.00	35.00	Negative	Negative
March 14, 1912	3.00	0.03	0.01	0.00	0.00	55.00	Negative	Negative
June 19, 1912	3.00	0.02	0.03	0.05	0.00	66.00	Negative	Negative
September 20, 1912	5.00	0.01	0.01	0.05	0.00	90.00	Negative	Negative
Water Supply of Marion, S. C. Marion Water and Electric Co. Source: Well 108 Feet Deep.								
December 29, 1911	5.00	0.02	0.01	0.00	0.00	176.00	Negative	Negative
March 14, 1912	5.00	0.04	0.01	0.00	0.00	187.00	Negative	Negative
June 14, 1912	7.00	0.01	0.04	0.00	0.00	156.00	Negative	Negative
September 27, 1912	7.00	0.02	0.05	0.00	0.00	144.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
Water Supply of Spartanburg, S. C. Spartanburg Waterworks. Source: Springs. City Consumption 750,000 Gals. Per Day.								
January 3, 1912	3.00	0.02	0.03	0.00	0.00	15.00	Negative	Negative
April 15, 1912	3.00	0.005	0.02	0.00	0.00	63.00	Negative	Negative
June 10, 1912	3.00	0.01	0.01	0.10	0.00	45.00	Negative	Negative
September 21, 1912	3.00	0.01	0.02	0.00	0.00	42.00	Negative	Negative
Water Supply of Sumter, S. C. Owned by City. Source: 8-6" Driven Wells, 2-8" and 1-10". Depth 8 to 45 Feet; and 2 Wells 400 Feet Deep.								
December 16, 1911	7.00	0.02	0.03	0.01	0.00	40.00	Negative	Negative
March 18, 1912	6.00	0.002	0.002	0.05	0.00	31.00	Negative	Negative
June 11, 1912	5.00	0.005	0.01	0.40	0.00	52.00	Negative	Negative
September 20, 1912	7.00	0.005	0.03	0.20	0.00	54.00	Negative	Negative
Water Supply of Timmons ville, S. C. Owned by City. Source: Well, in City. Diameter 8 Inches. Depth 500 Feet. Capacity 60 Gallons Per Minute								
March 15, 1912	3.00	0.03	0.03	0.00	0.00	90.00	Negative	Negative
June 14, 1912	7.00	0.02	0.03	0.00	0.00	85.00	Negative	Negative
September 12, 1912	6.00	0.01	0.02	0.00	0.00	105.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as NI- trates.	Nitrogen as NI- trites.	Total Solids.	Bacterial Indica- tions of Contam- ination.	Chemical Indica- tions of Contam- ination.
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Water Supply of Union, S. C.

Owned by City.

Source: Spring Branches, Two Miles from City, Rate of Flow 2,000,000 Gallons Per Day. Filtered. Capacity of Filters 250,000 Gallons.

December 18, 1911	4.00	0.02	0.02	0.00	0.00	45.00	Negative	Negative
March 12, 1912	4.00	0.04	0.02	0.00	0.00	50.00	Negative	Negative
June 10, 1912	4.00	0.02	0.02	0.01	0.00	50.00	Negative	Negative
September 20, 1912	7.00	0.03	0.04	0.00	0.00	103.00	Negative	Negative

Water Supply of Yorkville, S. C.

Owned by City.

Source: Spring Branch, 10 Feet Wide, 1½ Feet Deep. Rate of Flow About 250 Gals. Per Minute. Water is Collected in Sedimentation Basin, and Filtered Through Mechanical Filter.

December 13, 1911	3.00	0.04	0.04	0.00	0.00	85.00	Negative	Negative
March 12, 1912	3.00	0.04	0.10	0.00	0.00	60.00	Negative	Negative
June 24, 1912	4.00	0.01	0.02	0.00	0.00	119.00	Negative	Negative
September 23, 1912	6.00	0.02	0.03	0.10	0.00	95.00	Negative	Negative

Report of Director of Laboratory.

*To the Chairman and Members of the Executive Committee,
South Carolina State Board of Health.*

Gentlemen: I herewith submit my report as director of your laboratory for the year beginning December 1st, 1911, and ending November 30th, 1912.

PROGRESS OF WORK.

The most striking feature of the year's work has been the increase in all departments of our work, the average of all increases being 42 per cent. Over five thousand specimens were examined in the diagnosis laboratory, of which specimens 4,260 were submitted by 623 physicians, and 800 by laymen, the latter figure is greater than the entire number received in the first six months of the laboratory's existence. That nearly one-half of the physicians of the State, and nearly a thousand laymen are now calling on us for diagnosis seems ample justification of the establishment of the laboratory and an unanswerable argument in favor of its continuation.

WORK IN RABIES IMMUNIZATION.

The largest increase in our work was had here. Fifty-four per cent. is the increase in applications for treatment, and thirty-two per cent. the increase in complete treatments administered. For the first time we have completed a full year without a failure of treatment, and I have no deaths to report. Two persons who failed to take treatment died in this State during the past year. We now have a record of 245 consecutive cases without a death, a figure which will be enlarged, I trust.

One hundred and forty-nine animal heads were sent to the laboratory, of which 84 were positive, and 18 doubtful by reason of decomposition. The animals represented were dogs, swine and cats.

This increase in rabies among animals is a real and serious matter, its correction cannot be looked for through the Pasteur treatment, since this is only resorted to after the injury, cannot be applied as a general prophylactic measure like vaccination, and is not used on animals to any effective extent. It has considerable educational value on those treated at any rate. The proper view of rabies, i. e., as a deadly disease, communicable from ani-

mal to animal, including man, as other infectious diseases are, is the only proper one. This view accepted, the only logical procedures against the disease become self-evident. These are: First and most important, State-wide muzzling of all dogs not confined or in leash, at all seasons of the year. Second, the confining and safeguarding and careful observation of sick animals, particularly domestic dogs and cats, until proved to be suffering with some disease other than rabies. A dog which is not worth this attention is not likely to receive much other attention at his master's hands, and would be happier if chloroformed. Our case histories will show that three-fourths of all persons injured by rabid dogs, and applying for treatment, are bitten while caressing or feeding or examining "sick" dogs. That an intelligent man should pull open the jaws of a sick dog with unprotected hands in the search for a "worm under the tongue" seems incredible; yet many do so, and are exposed to infection by so doing. A quarantine, or, better, a noventine against dogs imported from other States and countries would be the final and logical steps in such a campaign. In Australia the period of detention for incoming dogs in six months, and the disease has never been known on the mainland of Australia.

TYPHOID PROPHYLACTIC.

Nearly 10,000 ampules of typhoid bacterin were prepared in the laboratory during the year and sent out to physicians. We have had no complaint as to infection or serious accident following the use of our bacterin. Considerable complaint was made of our inability to supply the bacterin fast enough, which, though regrettable, is also gratifying, justifying, as it does, the progressive action of your committee in taking up the work. Including all expenses, except installation of permanent apparatus, most of which is also used for other purposes, the cost of a full treatment for two persons, six doses, packed in a neat mailing box, is now only 20c., or 10c. per person. In June we adopted the plan of requiring reports from the physicians using the bacterin, and while these are imperfect and not extensive as yet, analysis of them gives some interesting data which are brought out in the accompanying tabulated statements.

I append also tables setting forth the scope and results of the other work of the laboratory. We are indebted to the Hygienic

Laboratory, Washington, D. C., for many courtesies during the year.

Respectfully submitted,
F. A. COWARD, M. D.

REPORT ON TYPHOID BACTERIN, PREPARED IN THE LABORATORY NOVEMBER 30, 1911-DECEMBER 1, 1912.

Total number of 1 c. c. ampules sent out	9,541
Total number of complete immunizations represented thereby	3,800
Cost per complete immunization	10c.
Total persons reported since July 1st, receiving two or more doses	1,054
Total so reported receiving three doses	737
Abscesses or infection after any injection (reported)	0
Serious complications reported	0
Typhoid fever after immunization (reported)	0
Analysis of reactions in 737 persons receiving full immunization:	

	First. Per cent.	Second. Per cent.	Third. Per cent.
Mild	37.9	34.4	42.4
Moderate	56.1	59.0	55.2
Severe	6.0	6.6	2.4
Total	100	100	100

SUMMARY OF WORK FOR IMMUNIZATION AGAINST RABIES.

Total number of patients beginning treatment	176*
Voluntarily discontinued	12
Under treatment Dec. 1, 1912	17
Total complete treatments for year 1912	147†
Deaths	0‡
Complications	0
Treated by mail	120
Treated by laboratory	27
Dog proved to have had rabies by examination at laboratory	87
Cases treated by advice or on request	60
Patients under 1 year old	0
Patients under 15 years old	83
Patients over 50 years old	9
Patients over 60 years old	5
Patients over 70 years old	2
Oldest patient	70 yrs.
Youngest patient	16 mos.
Bitten about the face	16
Bitten about other parts uncovered by clothing	77
*Increase over last year 54.3 per cent.	
†Increase over last year 32.4 per cent.	
‡Deaths last year 1.	

TABULATED STATEMENT OF EXAMINATION MADE IN LABORATORY
NOVEMBER 30, 1911, TO DECEMBER 1, 1912.

Kind of Examination.	Positive.	Negative.	Doubtful.	Total.
Widal Tests	624	1,249	115	1,988
Sputa for B. Tuberculosis	155	490	...	645
Hookworm Ova	443	1,644	...	2,090
Rabies	84	47	18	149
Gonococcus	34	53	...	87
B. Diphtheria	55	111	3	169
B. Coli in Water	31	28	...	59
B. Coli in Urine	1	1	...	2
B. Coli in Milk .....	...	...	...	1
*B. Typhosis in Milk .....	...	9	...	9
Plasmodium Malaria	8	60	...	68
B. Tuberculosis in Discharges other than Sputa .....	...	6	...	6
Blood Cultures .....	...	3	...	3
Miscellaneous Pathogenic Organisms. Pyogenic Cocci	7	4	...	11
B. Influenza	2	...	...	2
Pneumococcus	1	1	...	2
B. Tetani .....	...	1	...	1
Blastomyces	1	...	...	1
B. Leprae .....	...	1	...	1
Meningococcus	1	3	...	4
Miscellaneous Intestinal Parasites other than Hookworm.				
Ameba Hystolitica	2	5	...	7
Trichiuris	1	...	...	1
Ascaris L.	28	1	...	29
Oxyuris V.	2	...	...	2
Tenia Saginata .....	...	3	...	3
Tenia Nana	35	...	...	35
Intestinal Myasis.				
Larva of House Fly .....	...	...	...	4
Larva of Crane Fly .....	...	...	...	1
Larva undetermined .....	...	...	...	1
Miscellaneous Specimens for Identifica- tion.				
Intestinal Soap .....	...	...	...	2
Tapeworm Segment .....	...	...	...	1

*Average increase over last year in examinations and Rabies work 42.1 per cent.

SUMMARY.

*Total of Examinations	5,380
Total Submitted by Physicians	4,261
Number of Physicians Sending One or More Specimens	623
Submitted by Institutions and Laymen	799
Submitted by Agents of the Rockefeller Commission	320
Unfit for Examination	86

*Increase over last year 39.7 per cent.

Financial Statement.

The following is a correct statement of the expenditures of the State Board of Health for the fiscal year 1912, showing to whom paid and for what purpose. All claims against the Board are itemized and rendered in duplicate, the original being attached to warrant of Comptroller-General and forwarded to his office for payment—the duplicate being filed in this office.

EXPENDITURES.

STATE BOARD OF HEALTH FUND.

April	15.	Voucher No. 1.	To E. A. Hines, M. D., annual meeting.. . . .	\$ 42.60
April	15.	Voucher No. 2.	To E. A. Hines, M. D., trip to Westminster for State Board of Health.. . . .	5.80
April	15.	Voucher No. 3.	To Robt. Wilson, Jr., M. D., annual meeting.. . . .	38.40
April	15.	Voucher No. 4.	To W. W. Dodson, Ph. G., annual meeting.. . . .	40.60
April	15.	Voucher No. 5.	To C. C. Gambrell, M. D., annual meeting.. . . .	33.40
April	15.	Voucher No. 6.	To W. J. Burdell, M. D., annual meeting.. . . .	18.80
April	15.	Voucher No. 7.	To Wm. Egleston, M. D., annual meeting.. . . .	30.00
April	15.	Voucher No. 8.	To W. M. Lester, M. D., annual meeting.. . . .	4.00
June	12.	Voucher No. 9.	To Wm. Egleston, M. D., special meeting.. . . .	30.00
June	12.	Voucher No. 10.	To Robt. Wilson, Jr., M. D., special meeting.. . . .	38.00
June	12.	Voucher No. 11.	To W. W. Dodson, Ph. G., special meeting.. . . .	40.60
June	12.	Voucher No. 12.	To W. M. Lester, M. D., special meeting.. . . .	8.00
June	12.	Voucher No. 13.	To W. J. Burdell, M. D., special meeting.. . . .	14.80
June	12.	Voucher No. 14.	To C. C. Gambrell, M. D., special meeting.. . . .	33.40
June	12.	Voucher No. 15.	To D. B. Frontis, M. D., special meeting.. . . .	20.00
June	12.	Voucher No. 16.	To E. A. Hines, M. D., special meeting.. . . .	42.60
July	25.	Voucher No. 17.	To W. J. Burdell, M. D., regular quarterly meeting	18.80
July	25.	Voucher No. 18.	To W. M. Lester, M. D., (one day's work as mem- ber of Code Committee)..	8.00
July	25.	Voucher No. 19.	To E. A. Hines, M. D., regular quarterly meeting.	42.60
July	25.	Voucher No. 20.	To C. C. Gambrell, M. D., regular quarterly meet- ing.. . . .	33.40
July	25.	Voucher No. 21.	To W. W. Dodson, Ph. G., regular quarterly meet- ing.. . . .	40.60
July	25.	Voucher No. 22.	To D. B. Frontis, M. D., regular quarterly meet- ing.. . . .	20.00
July	25.	Voucher No. 23.	To W. M. Lester, M. D., regular quarterly meeting.	8.00
August	21.	Voucher No. 24.	To D. B. Frontis, M. D., special meeting.. . . .	20.00
August	21.	Voucher No. 25.	To C. C. Gambrell, M. D., special meeting.. . . .	33.40
August	21.	Voucher No. 26.	To E. A. Hines, M. D., special meeting.. . . .	42.60
August	21.	Voucher No. 27.	To W. W. Dodson, Ph. G., special meeting.. . . .	40.60
August	21.	Voucher No. 28.	To Wm. Egleston, M. D., special meeting.. . . .	33.60
August	21.	Voucher No. 29.	To Robt. Wilson, Jr., M. D., special meeting.. . . .	34.00
Oct.	7.	Voucher No. 30.	To E. A. Hines, M. D., regular quarterly meeting.	42.60
Oct.	7.	Voucher No. 31.	To Wm. Egleston, M. D., regular quarterly meeting	33.60
Oct.	7.	Voucher No. 32.	To Robt. Wilson, Jr., M. D., regular quarterly meeting.. . . .	38.00
Oct.	7.	Voucher No. 33.	To W. M. Lester, M. D., regular quarterly meeting.	4.00
Oct.	7.	Voucher No. 34.	To W. W. Dodson, Ph. G., regular quarterly meeting.. . . .	40.60

Oct.	7.	Voucher No. 35.	To W. J. Burdell, M. D., regular quarterly meeting	19.00
Oct.	7.	Voucher No. 36.	To D. B. Frontis, M. D., regular quarterly meeting	20.00
Dec.	13.	Voucher No. 37.	To Robt. Wilson, Jr., M. D., regular quarterly meeting..	38.00
Dec.	13.	Voucher No. 38.	To W. J. Burdell, M. D., regular quarterly meeting and inspection of Clemson College..	74.60
Dec.	13.	Voucher No. 39.	To W. M. Lester, M. D., regular quarterly meeting	4.00
Dec.	13.	Voucher No. 40.	To D. B. Frontis, M. D., regular quarterly meeting	53.80
Dec.	13.	Voucher No. 41.	To E. A. Hines, M. D., regular quarterly meeting and inspection of Winthrop and Clemson colleges..	93.00
Dec.	13.	Voucher No. 42.	To C. C. Gambrell, M. D., regular quarterly meeting..	33.40
Dec.	13.	Voucher No. 43.	To W. W. Dodson, Ph. G., regular quarterly meeting..	40.60
Dec.	13.	Voucher No. 44.	To Wm. Egleston, M. D., regular quarterly meeting..	33.60
Dec.	16.	Voucher No. 45.	To W. M. Lester, M. D., inspection of State Farm.	5.40
Dec.	31.	Voucher No. 46.	To Robert Wilson, Jr., M. D., special meeting.. . .	33.40
Dec.	31.	Voucher No. 47.	To Wm. Egleston, M. D., special meeting.. . . .	33.60
Jan.	3.	Voucher No. 48.	To W. J. Burdell, M. D., special meeting.. . . .	18.60
Jan.	3.	Voucher No. 49.	To E. A. Hines, M. D., special meeting.. . . .	42.60
Dec.	31.	Voucher No. 50.	To W. W. Dodson, M. D., special meeting.. . . .	40.60
Dec.	31.	Voucher No. 51.	To C. C. Gambrell, M. D., special meeting.. . .	33.40
Dec.	31.	Voucher No. 52.	To W. M. Lester, M. D., special meeting.. . . .	4.00
Dec.	31.	Voucher No. 53.	To Geo. H. Huggins, P. M. (stamps)..	93.00

Total.. \$ 1,700.00

Balance.. 300.00

\$ 2,000.00

Appropriation.. \$2,000.00

CONTINGENT FUND.

Feb.	1.	Voucher No. 1.	To F. A. Coward, M. D., Director of Laboratory, salary for January..	\$ 166.66
March	1.	Voucher No. 2.	To F. A. Coward, M. D., Director of Laboratory, salary for February..	166.66
March	1.	Voucher No. 3.	To J. R. Cain, assistant in laboratory, salary for January..	60.00
March	1.	Voucher No. 4.	To John Roundtree, janitor, salary for January and February..	59.00
March.	1.	Voucher No. 5.	To J. R. Cain, salary for February..	60.00
March	1.	Voucher No. 6.	To Chas. B. Geiger, special agent (smallpox).. . .	11.70
March	1.	Voucher No. 7.	To Powell Fuel Co., coal and wood..	9.25
March	1.	Voucher No. 8.	To Columbia Paper Co., wrapping paper.. . . .	2.86
March	1.	Voucher No. 9.	To Richard G. Badger, public hygiene..	10.42
March	1.	Voucher No. 10.	To G. M. Carpenter, office supplies..	4.10
March	1.	Voucher No. 11.	To Palmetto Ice Co., ice tickets..	6.00
March	1.	Voucher No. 12.	To Western Union Telegraph Co., telegrams.. . .	4.26
March	1.	Voucher No. 13.	To The State Company, printing..	250.91
March	1.	Voucher No. 14.	To Arthur H. Thomas Co., laboratory supplies.. .	9.74
March	1.	Voucher No. 15.	To C. J. Badger, addressograph supplies.. . . .	5.94
March	1.	Voucher No. 16.	To W. S. Stewart, office and laboratory supplies..	8.20
March	2.	Voucher No. 17.	To S. B. McMaster, opening lock on safe door.. .	2.00
March	2.	Voucher No. 18.	To Waverly Drug Co., rubber gloves..	2.25
March	2.	Voucher No. 19.	To Columbia Lumber & Mfg. Co., lumber.. . . .	8.89
March	2.	Voucher No. 20.	To Ernst Leitz, mechanical stage for microscope.	13.20
March	2.	Voucher No. 21.	To Jas. A. Hayne, State Health Officer, laboratory expenses for January and February.. . . .	45.69
March	5.	Voucher No. 22.	To The State Company., postal cards and printing.	110.00

March	8.	Voucher No. 23.	To The R. L. Bryan Co., office supplies.. . . .	33.85
March	8.	Voucher No. 24.	To Palmetto Ice Co., ice tickets.. . . .	6.00
March	8.	Voucher No. 25.	To G. H. Huggins, Postmaster, stamps.. . . .	25.00
March	8.	Voucher No. 26.	To Western Union Telegraph Co., telegrams.. . .	6.33
March	25.	Voucher No. 27.	To Telephone & Telegraph Co., telephone tolls (January, February, March).. . . .	22.45
March	27.	Voucher No. 28.	To B. D. Coughman, M. D., special agent (smallpox).. . . .	10.00
March	30.	Voucher No. 29.	To J. R. Cain, salary for March.. . . .	60.00
March	30.	Voucher No. 30.	To F. A. Coward, M. D., salary for March.. . .	166.66
March	30.	Voucher No. 31.	To John Roundtree, salary for March.. . . .	31.00
March	30.	Voucher No. 32.	To Arthur H. Thomas Co., laboratory supplies.. .	5.46
March	30.	Voucher No. 33.	To Arthur H. Thomas Co., laboratory supplies.. .	35.64
March	30.	Voucher No. 34.	To The State Co., printing.. . . .	139.75
March	30.	Voucher No. 35.	To G. M. Carpenter, office supplies.. . . .	1.90
March	30.	Voucher No. 36.	To Jas. A. Hayne, M. D., incidental expenses, laboratory and office, for March.. . . .	36.17
March	30.	Voucher No. 37.	To J. M. VanMetre, one roller top desk for office	32.50
March	30.	Voucher No. 38.	To Columbia Paper Co., office supplies.. . . .	1.60
March	30.	Voucher No. 39.	To National Vaccine and Antitoxin Co., vaccine virus (January, February, March).. . . .	963.11
April	9.	Voucher No. 40.	To H. M. Stuart, M. D., special agent (smallpox)	50.00
April	10.	Voucher No. 41.	To Western Union Telegraph Co., telegrams.. .	7.49
April	18.	Voucher No. 42.	To F. A. Coward, M. D., salary for April.. . .	166.66
April	18.	Voucher No. 43.	To T. H. Symmes, M. D., special agent (smallpox)	10.00
April	18.	Voucher No. 44.	To National Vaccine and Antitoxin Co., vaccine virus.. . . .	138.45
April	22.	Voucher No. 45.	To H. M. Alexander & Co., diphtheria antitoxin, (January, February, March).. . . .	444.90
April	23.	Voucher No. 46.	To George H. Huggins, Postmaster, stamps.. . .	25.00
April	26.	Voucher No. 47.	To A. S. Todd, M. D., special agent (smallpox)..	10.00
April	30.	Voucher No. 48.	To John Roundtree, salary for April.. . . .	37.50
April	30.	Voucher No. 49.	To J. R. Cain, salary for April.. . . .	60.00
May	3.	Voucher No. 50.	To Jas. A. Hayne, M. D., incidental expenses office and laboratory for April.. . . .	47.37
May	6.	Voucher No. 51.	To Western Union Telegraph Co., telegrams.. .	2.35
May	6.	Voucher No. 52.	To Powel Fuel Co., wood.. . . .	2.50
May	6.	Voucher No. 53.	To Columbia Paper Co., wrapping paper.. . . .	1.36
May	6.	Voucher No. 54.	To Palmetto Ice Co., ice tickets.. . . .	6.00
May	6.	Voucher No. 55.	To Waverly Drug Co., laboratory supplies.. . .	4.50
May	6.	Voucher No. 56.	To D. Appleton & Co., Warbross' Medical Sociology.	2.00
May	6.	Voucher No. 57.	To G. M. Carpenter, office supplies.. . . .	6.55
May	6.	Voucher No. 58.	To Arthur H. Thomas Co., laboratory supplies.. .	8.90
May	6.	Voucher No. 59.	To The State Co., printing.. . . .	91.50
May	6.	Voucher No. 60.	To The R. L. Bryan Co., stationery, etc.. . . .	10.30
May	7.	Voucher No. 61.	To W. J. Cayce, supplies for Joe Knight in small- pox quarantine.. . . .	6.35
May	7.	Voucher No. 62.	To American Medical Association, subscription for Journal.. . . .	5.00
May	7.	Voucher No. 63.	To Heyward's Pharmacy, laboratory supplies.. .	18.50
May	8.	Voucher No. 64.	To Columbia Lumber and Manufacturing Co., lumber.. . . .	11.98
May	8.	Voucher No. 65.	To W. S. Stewart, laboratory supplies.. . . .	10.20
May	8.	Voucher No. 66.	To The Daggett Printing Co., printing.. . . .	1.50
May	8.	Voucher No. 67.	To Southern Bell Telephone and Telegraph Co., telephone tolls for March and April.. . . .	24.30
May	8.	Voucher No. 68.	To Lea & Febiger, subscription to American Journal of Medical Science.. . . .	5.00
May	13.	Voucher No. 69.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
May	14.	Voucher No. 70.	To National Vaccine and Antitoxin Co., vaccine virus.. . . .	248.95

May	18.	Voucher No. 71.	To Columbia Gas Light Co., gas for January, February, March, April.. . . .	131.00
May	30.	Voucher No. 72.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory.. . . .	38.06
May	31.	Voucher No. 73.	To F. A. Coward, M. D., salary for May.. . . .	166.66
May	31.	Voucher No. 74.	To J. R. Cain, salary for May.. . . .	60.00
May	31.	Voucher No. 75.	To John Roundtree, salary for May.. . . .	38.75
May	31.	Voucher No. 76.	To National Vaccine and Antitoxin Co., antitoxin.. . . .	135.50
June	8.	Voucher No. 77.	To National Vaccine and Antitoxin Co., antitoxin.. . . .	33.90
June	8.	Voucher No. 78.	To Southern Bell Telephone and Telegraph Co., telephone tolls for May.. . . .	10.00
June	8.	Voucher No. 79.	To Heyward's Pharmacy, laboratory supplies.. . . .	16.65
June	8.	Voucher No. 80.	To Western Union Telegraph Co., telegrams.. . . .	13.72
June	8.	Voucher No. 81.	To Columbia Gas Light Co., gas for May.. . . .	13.08
June	8.	Voucher No. 82.	To The Palmetto Ice Co., ice tickets.. . . .	6.00
June	8.	Voucher No. 83.	To The State Co., printing.. . . .	55.00
June	8.	Voucher No. 84.	To G. M. Carpenter, repair on Fox typewriter.. . . .	1.00
June	8.	Voucher No. 85.	To W. S. Stewart, window and door screens.. . . .	14.07
June	8.	Voucher No. 86.	To American Medical Association, medical directory.. . . .	7.00
June	8.	Voucher No. 87.	To The State Co., printing.. . . .	138.25
June	13.	Voucher No. 88.	To J. M. Sease, M. D., special agent (smallpox).. . . .	12.50
June	17.	Voucher No. 89.	To Hubert Claytor, M. D., special agent (smallpox).. . . .	15.00
June	19.	Voucher No. 90.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
June	20.	Voucher No. 91.	To J. H. Bollin & Sons, bond.. . . .	7.00
June	21.	Voucher No. 92.	To F. A. Coward, M. D., salary for June.. . . .	166.66
June	29.	Voucher No. 93.	To J. R. Cain, salary for June.. . . .	60.00
June	29.	Voucher No. 94.	To John Roundtree, salary for June.. . . .	37.50
June	29.	Voucher No. 95.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory.. . . .	28.52
July	5.	Voucher No. 96.	To F. A. Coward, M. D., two trips for Board.. . . .	10.90
July	5.	Voucher No. 97.	To Palmetto Ice Co., ice tickets.. . . .	12.00
July	5.	Voucher No. 98.	To G. M. Carpenter, office supplies.. . . .	2.10
July	5.	Voucher No. 99.	To Southern Bell Telephone and Telegraph Co., telephone tolls for June.. . . .	10.65
July	5.	Voucher No. 100.	To Western Union Telegraph Co., telegrams.. . . .	2.08
July	5.	Voucher No. 101.	To Columbia Gas and Light Co., gas for June.. . . .	5.50
July	5.	Voucher No. 102.	To Department of Health, City of New York, Anti-meningitis Serum.. . . .	50.00
July	5.	Voucher No. 103.	To National Vaccine and Antitoxin Co., vaccine virus.. . . .	130.65
July	5.	Voucher No. 104.	To The State Co., printing.. . . .	199.75
July	5.	Voucher No. 105.	To Arthur H. Thomas Co., laboratory supplies.. . . .	104.16
July	5.	Voucher No. 106.	To Luce's Press Clipping Bureau, clippings.. . . .	9.65
July	5.	Voucher No. 107.	To Heyward's Pharmacy, laboratory supplies.. . . .	5.15
July	5.	Voucher No. 108.	Union Paper Co., mailing cases.. . . .	2.95
July	8.	Voucher No. 109.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
July	9.	Voucher No. 110.	To Geo. B. Radcliffe, five awnings for windows.. . . .	26.25
July	20.	Voucher No. 111.	To John N. Gaston, M. D., special agent (smallpox).. . . .	25.00
July	25.	Voucher No. 112.	To W. D. Grigsby, M. D., special agent (smallpox).. . . .	15.00
July	26.	Voucher No. 113.	To F. A. Coward, M. D., salary for July.. . . .	166.66
July	27.	Voucher No. 114.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
July	29.	Voucher No. 115.	To H. R. Tison, M. D., special agent (smallpox).. . . .	15.00
August	2.	Voucher No. 116.	To J. R. Cain, salary for August.. . . .	60.00
August	2.	Voucher No. 117.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory.. . . .	32.85
August	2.	Voucher No. 118.	To John Roundtree, salary for August.. . . .	38.75
August	7.	Voucher No. 119.	To Southern Bell Telephone and Telegraph Co., telephone tolls for July.. . . .	11.90
August	7.	Voucher No. 120.	To Palmetto Ice Co., ice tickets.. . . .	12.00
August	7.	Voucher No. 121.	To G. M. Carpenter, office supplies.. . . .	11.55
August	7.	Voucher No. 122.	To Heyward's Pharmacy, laboratory supplies.. . . .	9.15

August	7.	Voucher No. 123.	To H. K. Mulford Co., vaccine virus.. . . .	336.05
August	7.	Voucher No. 124.	To Arthur H. Thomas Co., laboratory supplies.. .	4.05
August	7.	Voucher No. 125.	To National Vaccine and Antitoxin Co., vaccine virus.. . . .	114.40
August	7.	Voucher No. 126.	To Western Union Telegraph Co., telegrams.. . . .	5.14
August	7.	Voucher No. 127.	To The State Co., printing.. . . .	53.50
August	7.	Voucher No. 128.	To W. S. Stewart, laboratory supplies.. . . .	9.75
August	7.	Voucher No. 129.	To Columbia Gas Light Co., gas for July.. . . .	5.75
August	7.	Voucher No. 130.	To Anti-fly Crusade, pamphlets.. . . .	7.50
August	7.	Voucher No. 131.	To Journal of Experimental Medicine.. . . .	5.00
August	7.	Voucher No. 132.	To The Daggett Printing Co., printing.. . . .	4.50
August	7.	Voucher No. 133.	To Columbia Paper Co., twine.. . . .	1.00
August	17.	Voucher No. 134.	To H. K. Mulford, vaccine virus.. . . .	182.00
August	17.	Voucher No. 135.	To Steele Glass Co., ampules for anti-typhoid bacterin.. . . .	87.50
August	17.	Voucher No. 136.	To Columbia Paper Co., wrapping paper.. . . .	2.70
August	17.	Voucher No. 137.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
August	24.	Voucher No. 138.	To The State Co., printing.. . . .	31.85
August	24.	Voucher No. 139.	To National Vaccine and Antitoxin Co., vaccine virus.. . . .	105.30
August	24.	Voucher No. 140.	To Arthur H. Thomas Co., laboratory supplies.. .	17.75
August	24.	Voucher No. 141.	To Columbia Lumber Mfg. Co., lumber.. . . .	6.40
August	26.	Voucher No. 142.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory.. . . .	36.71
August	31.	Voucher No. 143.	To John Roundtree, salary for August.. . . .	38.75
August	31.	Voucher No. 144.	To J. R. Cain, salary for August.. . . .	60.00
August	31.	Voucher No. 145.	To F. A. Coward, M. D., salary for August.. . . .	166.06
Sept.	5.	Voucher No. 146.	To H. M. Alexander & Co., diphtheria antitoxin..	436.20
Sept.	9.	Voucher No. 147.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
Sept.	9.	Voucher No. 148.	To W. H. Cunningham, posters for hookworm campaign.. . . .	5.00
Sept.	9.	Voucher No. 149.	To J. F. Wannamaker, M. D., special agent (small-pox).. . . .	10.00
Sept.	9.	Voucher No. 150.	To The State Co., printing.. . . .	106.75
Sept.	9.	Voucher No. 151.	To Palmetto Ice Co., ice tickets.. . . .	12.00
Sept.	9.	Voucher No. 152.	To Columbia Gas Light Co., gas for August.. . . .	7.13
Sept.	9.	Voucher No. 153.	To W. S. Stewart, laboratory supplies.. . . .	5.45
Sept.	9.	Voucher No. 154.	To Heyward's Pharmacy, laboratory supplies.. .	9.70
Sept.	9.	Voucher No. 155.	To Waverly Drug Co., laboratory supplies.. . . .	2.25
Sept.	9.	Voucher No. 156.	To Parke Davis & Co., typhoid bacterin.. . . .	120.88
Sept.	9.	Voucher No. 157.	To Western Union Telegraph Co., telegrams.. .	5.86
Sept.	9.	Voucher No. 158.	To Southern Bell Telephone and Telegraph Co., telephone tolls for August.. . . .	9.85
Sept.	9.	Voucher No. 159.	To F. A. Coward, M. D., salary for September.. .	166.66
Sept.	14.	Voucher No. 160.	To W. R. Harten, plumbing repairs in laboratory..	5.45
Sept.	18.	Voucher No. 161.	To Geo. H. Huggins, Postmaster, stamps.. . . .	25.00
Sept.	30.	Voucher No. 162.	To J. R. Cain, salary for September.. . . .	60.00
Sept.	30.	Voucher No. 163.	To John Roundtree, salary for September.. . . .	37.50
Sept.	30.	Voucher No. 164.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory.. . . .	50.35
Oct.	7.	Voucher No. 165.	To F. A. Coward, salary.. . . .	166.66
Oct.	7.	Voucher No. 166.	To Wm. Egleston, M. D., expenses as delegate to International Congress of Hygiene and Demography.. . . .	42.65
Oct.	8.	Voucher No. 167.	To Columbia Gas Light Co., gas for September..	4.25
Oct.	10.	Voucher No. 168.	To The Daggett Printing Co., printing.. . . .	5.75
Oct.	10.	Voucher No. 169.	To Western Union Telegraph Co., telegrams.. .	9.62
Oct.	10.	Voucher No. 170.	To Parke Davis & Co., typhoid bacterin.. . . .	33.00
Oct.	10.	Voucher No. 171.	To Palmetto Ice Co., ice tickets.. . . .	12.00
Oct.	10.	Voucher No. 172.	To The R. L. Bryan Co., office supplies.. . . .	3.15
Oct.	10.	Voucher No. 173.	To The State Co., printing.. . . .	130.75
Oct.	12.	Voucher No. 174.	To National Vaccine and Antitoxin Co.. . . .	123.05

Oct.	12.	Voucher No. 175.	To The State Co., printing..	17.50
Oct.	12.	Voucher No. 176.	To Heyward's Pharmacy, laboratory supplies.. . .	13.85
Oct.	12.	Voucher No. 177.	To Columbia Paper Co., wrapping paper..	1.80
Nov.	7.	Voucher No. 178.	To H. M. Alexander & Co., diphtheria antitoxin..	1,844.55
Oct.	21.	Voucher No. 179.	To Chas. P. Vincent, M. D., special agent (smallpox)..	30.00
Oct.	21.	Voucher No. 180.	To Geo. H. Huggins, Postmaster, stamps..	25.00
Oct.	24.	Voucher No. 181.	To G. C. Franklin, M. D., special agent (smallpox)..	10.00
Oct.	24.	Voucher No. 182.	To J. T. Taylor, M. D., special agent (smallpox)..	25.00
Oct.	29.	Voucher No. 183.	To National Vaccine and Antitoxin Co., vaccine virus..	263.25
Nov.	1.	Voucher No. 184.	To J. R. Cain, salary for October..	60.00
Nov.	1.	Voucher No. 185.	To John Roundtree, salary for October..	38.75
Nov.	4.	Voucher No. 186.	To The State Co., printing..	186.05
Nov.	4.	Voucher No. 187.	To Powell Fuel Co., coal..	3.25
Nov.	4.	Voucher No. 188.	To Barfield Printing Co., printing..	26.00
Nov.	4.	Voucher No. 189.	To Columbia Gas Light Co., gas for October.. . . .	7.50
Nov.	4.	Voucher No. 190.	To Columbia Sign Works, printing signs..	8.00
Nov.	4.	Voucher No. 191.	To G. M. Carpenter, coupon book, typewriter ribbons..	7.00
Nov.	4.	Voucher No. 192.	To G. J. Badger, addressograph supplies..	3.39
Nov.	4.	Voucher No. 193.	To Arthur H. Thomas Co., laboratory supplies.. . .	10.69
Nov.	4.	Voucher No. 194.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory..	43.88
Nov.	8.	Voucher No. 195.	To National Vaccine and Antitoxin Co., vaccine virus..	99.45
Nov.	8.	Voucher No. 196.	To Union Paper Co., mailing cases..	9.50
Nov.	16.	Voucher No. 197.	To G. C. Franklin, M. D., special agent (smallpox)..	35.00
Nov.	16.	Voucher No. 198.	To P. Blakiston's Son & Co., books..	7.75
Nov.	16.	Voucher No. 199.	To Western Union Telegraph Co., telegrams.. . . .	2.27
Nov.	18.	Voucher No. 200.	To H. M. Alexander & Co., diphtheria antitoxin..	1,253.95
Nov.	18.	Voucher No. 201.	To Geo. H. Huggins, Postmaster, stamps..	25.00
Nov.	25.	Voucher No. 202.	To Kentucky State Medical Association, mailing cases..	67.50
Nov.	25.	Voucher No. 203.	To J. M. Cantey, insurance on laboratory equipment..	27.00
Nov.	29.	Voucher No. 204.	To John Roundtree, salary for November..	37.50
Nov.	30.	Voucher No. 205.	To F. A. Coward, salary for November..	166.66
Nov.	30.	Voucher No. 206.	To J. R. Cain, salary for November..	60.00
Nov.	30.	Voucher No. 207.	To Jas. A. Hayne, M. D., incidental expenses, office and laboratory..	17.82
Dec.	2.	Voucher No. 208.	To The State Co., printing..	38.25
Dec.	2.	Voucher No. 209.	To The R. L. Bryan Co., office supplies..	3.45
Dec.	2.	Voucher No. 210.	To The News Advocate, printing..	2.50
Dec.	2.	Voucher No. 211.	To Palmetto Ice Co., ice tickets..	6.00
Dec.	2.	Voucher No. 212.	To W. C. Abel, M. D., special agent (smallpox)..	10.00
Dec.	2.	Voucher No. 213.	To Columbia Gas Light Co., gas for November.. . .	12.28
Dec.	2.	Voucher No. 214.	To W. S. Stewart, stoves..	29.70
Dec.	2.	Voucher No. 215.	To Heyward's Pharmacy, laboratory supplies.. . . .	12.10
Dec.	2.	Voucher No. 216.	To G. M. Carpenter, office supplies..	7.35
Dec.	16.	Voucher No. 217.	To F. A. Coward, M. D., salary for December.. . .	208.33
Dec.	20.	Voucher No. 218.	To Geo. H. Huggins, stamps..	25.00
Dec.	21.	Voucher No. 219.	To J. R. Cain, salary for December..	60.00
Dec.	21.	Voucher No. 220.	To J. A. Hayne, office expenses..	23.80
Dec.	21.	Voucher No. 221.	To John Roundtree, salary for December..	38.75
Dec.	21.	Voucher No. 222.	To Dr. E. C. B. Mole, special agent (smallpox)..	15.00
Dec.	21.	Voucher No. 223.	To A. M. Browning, special agent (smallpox).. . .	10.00
Dec.	21.	Voucher No. 224.	To Western Union Telegraph Co., telegrams for November..	5.37
Dec.	21.	Voucher No. 225.	To Dr. LaBorde, two days' service, special agent (smallpox)..	10.00
Dec.	21.	Voucher No. 226.	To Heyward's Pharmacy, laboratory supplies.. . .	7.80

Dec.	21.	Voucher No. 227.	To Powell Fuel Co., coal for office for November..	3.25
Dec.	21.	Voucher No. 228.	To The State Co., printing envelopes, etc.. . . .	7.50
Dec.	21.	Voucher No. 229.	To P. Blakiston's Son & Co., books for use in office.. . . .	3.75
Dec.	23.	Voucher No. 230.	To Miss Hallie Josey, stenographic work.. . . .	50.00
Dec.	23.	Voucher No. 231.	To Dr. W. C. Abel, special agent (smallpox).. . .	10.00
Dec.	23.	Voucher No. 232.	To Dr. A. B. Hooton, special agent (smallpox).. . .	15.00
Dec.	30.	Voucher No. 233.	To Southern Bell Telephone and Telegraph Co., 'phone service for September, October, November.. . . .	49.25
Jan.	3.	Voucher No. 234.	To Dr. T. J. Peake, special agent (smallpox).. . .	20.00
Jan.	3.	Voucher No. 235.	To Columbia Railway, Gas and Electric Co., gas for December.. . . .	11.50
Jan.	3.	Voucher No. 236.	To National Vaccine and Antitoxin Institute, vaccine virus for November.. . . .	85.80
Jan.	3.	Voucher No. 237.	To Heyward's Pharmacy, laboratory supplies.. . .	17.35
Jan.	3.	Voucher No. 238.	To Mr. Richard Singleton, antitoxin used on Mrs. M. R. Singleton's child.. . . .	8.20
Jan.	3.	Voucher No. 239.	To Palmetto Ice Co., ice for December.. . . .	6.00
Jan.	3.	Voucher No. 240.	To Luce's Press Clipping Bureau, clippings on Tuberculosis and Pellagra.. . . .	5.75
Jan.	3.	Voucher No. 241.	To Powell Fuel Co., coal for December.. . . .	9.75
Jan.	7.	Voucher No. 242.	To Jas. A. Hayne, incidentals laboratory and office.. . . .	13.85
Jan.	7.	Voucher No. 243.	To Western Union Telegraph Co., telegrams.. . . .	3.65
Jan.	7.	Voucher No. 244.	To Columbia Paper Co., office supplies.. . . .	3.44
Jan.	7.	Voucher No. 245.	To Southern Bell Telephone and Telegraph Co., toll and telephone service.. . . .	11.00
Jan.	23.	Voucher No. 246.	To Chesapeake Glass Co., vials.. . . .	28.44
Jan.	23.	Voucher No. 247.	To The R. L. Bryan Co., office supplies.. . . .	1.40
Jan.	23.	Voucher No. 248.	To The State Co., printing envelopes, etc.. . . .	35.10
Jan.	24.	Voucher No. 249.	To Hubert Claytor, M. D., acting as special agent State Board of Health.. . . .	60.00
Jan.	27.	Voucher No. 250.	To C. Q. West, M. D., acting as special agent to suppress smallpox.. . . .	10.00
Total.. . . .				\$14,685.42
Balance.. . . .				314.58
				<hr/> \$15,000.00

Appropriation, \$15,000.00.

FUND FOR TRAVELING EXPENSES STATE HEALTH OFFICER.

March	2.	Voucher No. 1.	To S. H. McLean, Agent Southern Railway, mileage book.. . . .	\$40.00
March	20.	Voucher No. 2.	To S. H. McLean, Agent Southern Railway, mileage book.. . . .	20.00
March	30.	Voucher No. 3.	To Jas. A. Hayne, M. D., traveling expenses.. . .	43.05
April	29.	Voucher No. 4.	To S. H. McLean, Agent Southern Railway, mileage book.. . . .	20.00
April	29.	Voucher No. 5.	To Jas. A. Hayne, M. D., traveling expenses.. . .	20.05
May	7.	Voucher No. 6.	To J. B. Wylie, Agent S. A. L. Railway, mileage book.. . . .	20.00
May	30.	Voucher No. 7.	To Jas. A. Hayne, M. D., traveling expenses.. . .	57.95
May	30.	Voucher No. 8.	To J. B. Wylie, Agent S. A. L. Railway, mileage book.. . . .	20.00
June	3.	Voucher No. 9.	To S. H. McLean, Agent Southern Railway, mileage book.. . . .	20.00
May	29.	Voucher No. 10.	To Jas. A. Hayne, M. D., traveling expenses.. . .	72.30
July	30.	Voucher No. 11.	To Jas. A. Hayne, M. D., traveling expenses.. . .	44.85
August	31.	Voucher No. 12.	To Jas. A. Hayne, M. D., traveling expenses.. . .	19.95

SALARY STATE HEALTH OFFICER.

Appropriation, \$2,500.00.

March	1.	To Miss Julia P. Tompkins, salary January and February..	\$120.00
April	1.	To Miss Julia P. Tompkins, salary for March..	60.00
May	1.	To Miss Julia P. Tompkins, salary for April..	60.00
June	1.	To Miss Julia P. Tompkins, salary for May..	60.00
July	1.	To Miss Julia P. Tompkins, salary for June..	60.00
August	1.	To Miss Julia P. Tompkins, salary for July..	60.00
Sept.	1.	To Miss Julia P. Tompkins, salary for August..	60.00
Oct.	1.	To Miss Julia P. Tompkins, salary for September..	60.00
Nov.	1.	To Miss Julia P. Tompkins, salary for October..	60.00
Dec.	1.	To Miss Julia P. Tompkins, salary for November..	60.00
Dec.	24.	To Miss Julia P. Tompkins, salary for December..	60.00
			<hr/> \$720.00

ROCKEFELLER SANITARY COMMISSION FUND.

Jan.	31.	Voucher No. 1.	To F. D. Rodgers, salary and traveling expenses for January.	\$211.60
Jan.	31.	Voucher No. 2.	To F. M. Routh, salary and traveling expenses for January.	228.58
Jan.	31.	Voucher No. 3.	To J. LaBue Ward, salary and traveling expenses for January.	243.78
Jan.	31.	Voucher No. 4.	To J. R. Cain, salary for January.	40.00

Jan.	31.	Voucher No. 5.	To A. S. Williams, salary for January.. . . .	40.00
Jan.	31.	Voucher No. 7.	To Milton Weinberg, salary and traveling expenses for January.. . . .	198.56
Jan.	31.	Voucher No. 8.	To J. T. Howell, salary and traveling expenses for January.. . . .	227.75
Feb.	27.	Voucher No. 9.	To Dr. J. LaBruce Ward, salary and traveling expenses for February.. . . .	275.97
Feb.	29.	Voucher No. 10.	To F. D. Rodgers, salary and traveling expenses for February.. . . .	192.15
Feb.	29.	Voucher No. 11.	To J. R. Cain, salary for February.. . . .	40.00
Jan.	29.	Voucher No. 12.	To A. S. Williams, salary for February.. . . .	40.00
Jan.	29.	Voucher No. 13.	To F. M. Routh, salary and traveling expenses for February.. . . .	206.23
Feb.	29.	Voucher No. 14.	To Milton Weinberg, salary and traveling expenses for February.. . . .	231.83
Feb.	29.	Voucher No. 15.	To J. T. Howell, salary and traveling expenses for February.. . . .	207.66
March	30.	Voucher No. 16.	To J. LaBruce Ward, salary and traveling expenses for March.. . . .	320.63
March	30.	Voucher No. 17.	To A. S. Williams, salary for March.. . . .	40.00
March	30.	Voucher No. 18.	To J. R. Cain, salary for March.. . . .	40.00
March	30.	Voucher No. 19.	To F. D. Rodgers, salary and traveling expenses for March.. . . .	215.10
March	30.	Voucher No. 20.	To F. M. Routh, salary and traveling expenses for March.. . . .	222.55
March	30.	Voucher No. 21.	To J. T. Howell, salary and traveling expenses for March.. . . .	199.04
March	30.	Voucher No. 22.	To Milton Weinberg, salary and traveling expenses for March.. . . .	218.79
April	30.	Voucher No. 23.	To J. LaBruce Ward, salary and traveling expenses for April.. . . .	268.13
April	30.	Voucher No. 24.	To J. T. Howell, salary and traveling expenses for April.. . . .	222.25
April	30.	Voucher No. 25.	To F. M. Routh, salary and traveling expenses for April.. . . .	269.63
April	30.	Voucher No. 26.	To F. D. Rodgers, salary and traveling expenses for April.. . . .	207.50
April	30.	Voucher No. 27.	To Milton Weinberg, salary and traveling expenses for April.. . . .	208.65
April	30.	Voucher No. 28.	To J. R. Cain, salary for April.. . . .	40.00
April	30.	Voucher No. 29.	To A. S. Williams, salary for April.. . . .	40.00
May	31.	Voucher No. 30.	To J. LaBruce Ward, salary and traveling expenses for May.. . . .	292.07
May	31.	Voucher No. 31.	To J. R. Cain, salary for May.. . . .	40.00
May	31.	Voucher No. 32.	To A. S. Williams, salary for May.. . . .	40.00
May	31.	Voucher No. 33.	To F. D. Rodgers, salary and traveling expenses for May.. . . .	219.90
May	31.	Voucher No. 34.	To J. T. Howell, salary and traveling expenses for May.. . . .	228.20
May	31.	Voucher No. 35.	To F. M. Routh, salary and traveling expenses for May.. . . .	238.95
May	31.	Voucher No. 36.	To Milton Weinberg, salary and traveling expenses for May.. . . .	31.85
June	29.	Voucher No. 37.	To J. LaBruce Ward, salary and traveling expenses for June.. . . .	277.71
June	29.	Voucher No. 38.	To J. T. Howell, salary and traveling expenses for June.. . . .	228.60
June	29.	Voucher No. 39.	To J. R. Cain, salary for month.. . . .	40.00
June	29.	Voucher No. 40.	To A. S. Williams, salary for month.. . . .	40.00
June	29.	Voucher No. 41.	To F. D. Rodgers, salary and traveling expenses for June.. . . .	220.15

June	29.	Voucher No. 42.	To F. M. Routh, salary and traveling expenses for June.. . . .	210.79
July	30.	Voucher No. 43.	To J. LaBruce Ward, salary and traveling expenses.. . . .	292.58
July	30.	Voucher No. 44.	To J. R. Cain, salary for July.. . . .	40.00
July	30.	Voucher No. 45.	To A. S. Williams, salary for July.. . . .	40.00
July	30.	Voucher No. 46.	To L. A. Riser, salary and traveling expenses for July.. . . .	193.85
July	30.	Voucher No. 47.	To F. D. Rodgers, salary and traveling expenses for July.. . . .	213.15
July	30.	Voucher No. 48.	To F. M. Routh, salary and traveling expenses for July.. . . .	194.25
July	30.	Voucher No. 49.	To J. T. Howell, salary and traveling expenses for July.. . . .	222.50
August	31.	Voucher No. 50.	To J. LaBruce Ward, salary and traveling expenses for August.. . . .	232.73
August	31.	Voucher No. 51.	To J. R. Cain, salary for August.. . . .	40.00
August	31.	Voucher No. 52.	To A. S. Williams, salary for August.. . . .	40.00
August	31.	Voucher No. 53.	To L. A. Riser, salary and traveling expenses for August.. . . .	199.85
August	31.	Voucher No. 54.	To F. D. Rodgers, salary and traveling expenses for August.. . . .	204.65
August	31.	Voucher No. 55.	To F. M. Routh, salary and traveling expenses for August.. . . .	216.20
August	31.	Voucher No. 56.	To J. T. Howell, salary and traveling expenses for August.. . . .	212.45
Sept.	28.	Voucher No. 57.	To J. LaBruce Ward, salary and traveling expenses for September.. . . .	304.03
Sept.	28.	Voucher No. 58.	To F. D. Rodgers, salary and traveling expenses for September.. . . .	212.65
Sept.	28.	Voucher No. 59.	To L. A. Riser, salary and traveling expenses for September.. . . .	198.05
Sept.	28.	Voucher No. 60.	To F. M. Routh, salary and traveling expenses for September.. . . .	199.30
Sept.	28.	Voucher No. 61.	To J. T. Howell, salary and traveling expenses for September.. . . .	202.85
Sept.	28.	Voucher No. 62.	To J. R. Cain, salary for September.. . . .	40.00
Sept.	28.	Voucher No. 63.	To A. S. Williams, salary for September.. . . .	40.00
Oct.	31.	Voucher No. 64.	To J. LaBruce Ward, salary and traveling expenses for October.. . . .	319.38
Oct.	31.	Voucher No. 65.	To F. D. Rodgers, salary and traveling expenses for October.. . . .	247.35
Oct.	31.	Voucher No. 66.	To A. S. Williams, salary for October.. . . .	40.00
Oct.	31.	Voucher No. 67.	To J. R. Cain, salary for October.. . . .	40.00
Oct.	31.	Voucher No. 68.	To J. T. Howell, salary and traveling expenses for October.. . . .	213.60
Oct.	31.	Voucher No. 69.	To F. M. Routh, salary and traveling expenses for October.. . . .	214.95
Oct.	31.	Voucher No. 70.	To L. A. Riser, salary and traveling expenses for October.. . . .	201.30
Nov.	30.	Voucher No. 71.	To J. LaBruce Ward, salary and traveling expenses for November.. . . .	305.63
Nov.	30.	Voucher No. 72.	To A. S. Williams, salary for November.. . . .	40.00
Nov.	30.	Voucher No. 73.	To J. R. Cain, salary for November.. . . .	40.00
Nov.	30.	Voucher No. 74.	To F. D. Rodgers, salary and traveling expenses for November.. . . .	222.70
Nov.	30.	Voucher No. 75.	To F. M. Routh, salary and traveling expenses for November.. . . .	210.95
Nov.	30.	Voucher No. 76.	To J. T. Howell, salary and traveling expenses for November.. . . .	194.75
Nov.	30.	Voucher No. 77.	To L. A. Riser, salary and traveling expenses for November.. . . .	233.90

Dec.	22.	Voucher No. 78.	To J. LaBruce Ward, salary and traveling expenses for December..	222.32
Dec.	22.	Voucher No. 79.	To J. R. Cain, salary for December..	40.00
Dec.	22.	Voucher No. 80.	To A. S. Williams, salary for December..	40.00
Dec.	22.	Voucher No. 81.	To L. A. Riser, salary and traveling expenses for December..	208.65
Dec.	22.	Voucher No. 82.	To F. D. Rodgers, salary and traveling expenses for December..	208.70
Dec.	22.	Voucher No. 83.	To F. M. Routh, salary and traveling expenses for December..	160.25
Dec.	22.	Voucher No. 84.	To J. T. Howell, salary and traveling expenses for December..	174.50

Total.. \$14,119.53

CONTINGENT FUND—October, November and December, for
Printing, Express, etc.. \$ 95.13

S. C. STATE LIBRARY